Occidental Medical Times.

Vol. VII. OCTOBER, 1893. No. 10.

AN ADDRESS,

Delivered before the Woman's Medical Club of the Pacific.

By E. S. Meade,[1] M. D., President, San Jose, Cal.

I am well aware that the presiding officer is but a small and very insignificant part of a society, and more especially of a club of this kind, composed of strong, active women, who have come to the profession of medicine from almost as many avocations as there are individuals; and from every point of the compass, and almost every State in the Union. Therefore we must not be surprised if at first there is not perfect coalescence. Struggling for bread or place or power brings strength to the one who is able to stand amid the buffetings of the world, and we may say now, but not with the significance of old, that "they also serve who only stand and wait."

There are many things which I hope in this new year you may bring to this society for deliberation, discussion, solution. There are the demands of society and often its unjust strictures on medical women, singly and as a body. I can see no valid reason why the criminal practices of one woman should condemn the whole fraternity of women physicians, while the same practices conducted by man pass without criticism. "Can we love the offender, yet detest the offense?"

The question of temperance is one that I hope you will not overlook in your coming deliberations. In this matter I feel the time has come to place ourselves on record before the public. We may, as individuals, have wide differences of opinion in regard to the methods to be employed in the obliteration of a race of inebriates, smokers, and morphine fiends.

The social evil, also, seems to me one with which we needs must have, directly or indirectly, more or less to do. My personal experience with fallen women does not tend to make me a very great enthusiast about ever reclaiming any considerable number of them to lives of usefulness, purity, and peace. But are there not some methods whereby young girls can be saved from the first wrong step?

Is there not something deficient in our home or school life—a lack of moral training? The inculcation in childhood to practise the golden rule; to do right for right's sake; for upon this alone can we build the beautiful and solid structure called character.

---

[1] Dr. Meade, who is a graduate of the Woman's Medical College of Pennsylvania (1869), was the first woman to practise medicine on the Pacific coast. She is also the first President of this organization of medical women.

It would not be proper for me to compare your little club to Liberty enlightening the world, but there are many ways by which you can reach the children, and in the good time coming may there not be one or two women physicians on every school board, whose especial duty it should be to look after the physical needs of the children? Light enough and in proper proximity to the eyes; air, ventilation, food, clothing, vaccination, comfortable seats and of such proportions as to rest and not deform the child occupying them.

I hope sometime there will be a "Children's Rights" society, and if there be, I shall join (if they will have me), and these are some of the things I hope will be adopted: That every child has a right to a healthy, clean parentage—free from any and all taint of disease, insanity, or intemperance. That any person or persons becoming parents in violation of these conditions shall be subject to fine or imprisonment, or both, at the discretion of the Court.

I earnestly hope your combined efforts may accomplish something to save the children from incompetent and careless mothers, thoughtless and selfish fathers.

Many of you, no doubt, have seen Dr. Green's little book "Build Well," treating of the reproductive elements, and in such a manner that boys and girls nearing puberty can perfectly understand. Dr. Emily Blackwell has also a little book "Counsel to Parents on the Moral Training of Children," which is spoken of very highly.

In regard to our Medical Journals, is it not quite time that we demand a more concentrated form of medical reading? To me it seems very tedious to wade through page after page of medical lore to find as the end or upshot of all the words—words—words—that a man had been using glasses misadjusted or wearing a tight boot; and then we mentally say, "Is that all? Why didn't you say it long ago?" But "of making of new books there is no end"—may be true to-day as it was at the time of the writing of "Aurora Leigh."

In conclusion let me say that in 1875 there were admitted to the Medical Society of the State of California, five women graduates of medicine. The vote to elect them being submitted to roll-call, showed there was a tie, and now came the supreme moment: All eyes turned to the presiding officer, Dr. A. B. Nixon, of Sacramento, and he, in a voice a little choked with emotion (for the debate had been warm and sometimes personal), said: "And I, gentlemen, cast the needed vote and declare the ladies elected." Then followed cheering and other sounds, enough to indicate that the serpent is still in Eden. His widow took her degree of M. D. from Cooper Medical College in December, 1892. "He rests from his labors but his works do follow him."

CHLOROFORM OR ETHER?

By E. CALDERON, M. D., San Francisco, Cal.

Read before the California Academy of Medicine.

The tragic and unexpected death of Colonel Shepard, of New York, some time since, had such a sensational echo throughout this country that it seems of moment to say something about the cause of the fatality.

In this city I have seen ether used as an anesthetic, and the very first case of ether administration that I witnessed was that of an old lady, whose behavior during etherization was so noisy and restless that she broke the ether bottle in the hands of the administrator and many porcelain trays lying around the operating table. The impression was not very agreeable for the spectator; the patient coughed much, gave signs of choking, and her muscles were in a state of tension, so that the operation was interrupted very often by movements of the limbs.

After the operation had been completed, I asked the attending physician why he did not use chloroform as an anesthetic, a drug that would act more surely, and would thoroughly relax the muscles of patients under its influence. He replied that in this country ether is considered a safer drug than chloroform, and that if a fatality should occur during the use of the latter, it would surely be said that this was to be expected when using such a dangerous anesthetic as chloroform. Had ether been employed, death would not have occurred, or if it did happen, nobody could make charges of carelessness against the simple fact of administering ether.

I consider it quite wrong to regard the administration of chloroform as culpable carelessness, and in support of my assertion I adduce the fact that, in most of the European clinics, and in my own experience, chloroform has been the only anesthetic administered. "If you have never used chloroform, try it next time," I said, "and you will be better satisfied with its use than you are now with that of ether." Afterwards I had the pleasure of seeing that the gentleman referred to, who is a visiting surgeon to one of our large hospitals in this city, now uses chloroform in all his operations, with the best results.

Several years ago, when a student, I had to give chloroform in my first terms in the clinic, in at least a thousand cases, and afterwards in general practice during a six years' residence in Central America, Mexico, and in this city. On many occasions I have administered chloroform, alone, in confinements and in minor operations, which, for want of assistance, I had to perform alone, attending first to the anesthetic and afterward operating. I have also administered chloroform during capital operations performed by others. This new series includes at least four hundred cases, and during this long experience I have never had a death upon the operating table. Chloroform has been, therefore, not so dangerous in my hands as the partisans of ether would have expected. I have administered it in long operations lasting from three to four hours.

The case of Colonel Shepard has now demonstrated that ether is not such a harmless drug as its advocates pretended. Before that, we knew that ether possessed the following disadvantages: The narcoses are less profound, and more disagreeable to the patient and operator; it produces choking and irritates the respiratory tract; after its use, bronchitis occurs; it is, therefore, contra-indicated in lung diseases, it has even produced pneumonia. The odor of ether sometimes appears for three days in the expired air of persons who have taken it. Ether cannot be used in operations on the neck, nor in long operations on the buccal cavity or face, owing to the large size of the inhaler and because its continual and readjustment hinders the operator.

If these are the contra-indications of ether, chloroform has none; or, if any, they are only relative, as pulmonary emphysema, fatty degeneration of the heart, general obesity, in which states chloroform must be given very carefully. The first requisite for administration is to have a good drug, and this can be obtained by crystallization of chloroform under evaporation of liquified gases, after the method of Pictet, of Geneva. The better the chloroform, the safer the narcosis, and the smaller quantity of chloroform given shows more skill on the part of the chloroformist, who thus avoids giving an overdose and consequent poisoning of the blood by the drug. For this purpose, Leon Labbe, in 1881, recommended that chloroform be administered drop by drop, every two or three seconds. This is the best method and the one I have always followed, using Esmarch's inhaler. With this drop method the initial hypodermic injection of morphine in cases of drunkards is unnecessary.

There are grave mistakes which, when made, cause fatal issues, and should be so held in law suits against the attending physician or chloroformist. These are, first, to submit a patient to the administration of chloroform after a full meal, because this delays narcosis and renders it difficult, and if vomiting should set in, there is great danger of asphyxia, by food passing into the trachea. Another mistake is to let patients with artificial teeth, with foreign bodies, as tobacco, in their mouth take the anesthetic without first removing them. Also, to allow patients with tight clothes around the breast or abdomen be anesthetized before loosening these bands.

The operating room must be well ventilated, and this must be regulated according to the number of persons in the room during the operation. Gas light is dangerous, both to operator and patient, because it gives, with chloroform, which decomposes it, two irrespirable gases, chlorine and muriatic acid. This takes place in contact with the flames, in whose neighborhood the irrespirable gases can attain a proportion of 0.02 to 0.08 per cent. for chlorine and 0.04 to 0.71 per cent. for muriatic acid, according to the researches of Pettenkofer and of my fellow students, Ludwig Eisenlohr and Claudio Fermi.[1] These gases are highly irritating to the respiratory tract. This will explain the trouble of patients and operators who have been in a gas lighted, poorly-ventilated room where chloroform was administered.

The golden rule of Simpson, the discoverer of the anesthetic properties of chloroform, must be followed; that is, not to begin to cut nor even to touch or examine the patient before full insensibility sets in. These manipulations attract the attention of the patient, delay narcosis, and, by reflex action in consequence of incisions and severe pain, the heart can be paralyzed. We all remember having seen in the physiological laboratory how irritation of peripheral nerves or severe injuries and maiming of animals retarded the pulse or paralyzed the heart for seconds in consequence of the shock produced. On the same principle, we must never administer chloroform to persons who are still under the influence of shock after severe bodily injuries. The symptoms of shock must have passed away before we can proceed to anesthetization, but should an operation be absolutely necessary it should be performed immediately, and without chloroform, while the shock still lasts; in this condition the patient is almost insensible and can stand any operation.

To prevent the usual vomiting after an anesthetic, the most rational way is to restrain patients from swallowing their own saliva, which always contains a certain proportion of chloroform. For this reason we must compel them to spit out while they are not unconscious, and when fully unconscious the head should be laid on one side from time to time to allow the saliva to flow from the mouth. This will also prevent suffocation.

In the foregoing I have only laid down some of the elementary and well-known rules that I have followed in using chloroform and to the strict observance of which I ascribe my success in the handling of that drug. Any one present knows how to meet the accidents which may happen; drawing out the tongue, should this organ fall back and over the larynx; the use of hypodermics of caffein and camphor to strengthen the heart; hypodermoclysis of salt water solutions when great losses of blood occur during operation, to eliminate more quickly the absorbed chloroform; the use of artificial respiration, etc.

I wish to call attention to the remarkable method of preventing collapse, recently described by Dr. Maass,[2] Assistant to Professor Konig in Gottingen. This consists in strong and rapid pressure on the patient's breast, at a rate of 100 to 120 to the minute, and kept up for a long time. The left breast in the region of the heart is taken with the right hand, the physician's face being turned to that of the patient; the right thumb lies in front in the anterior intercostal spaces, and the other fingers of the right hand clasp the back.

---

[1] "Archiv f. Hygiene, Bd. 13, Heft 3."

[2] Berliner klin. Wochenschrift, No. 12, 1892.

While all these facts have long been known, we cannot learn how to administer anesthetics from books; it is an art that must be acquired and exercised in frequent practice and long experience. Every physician should be obliged, before going into practice, to show at his final examination that he is capable of administering an anesthetic with safety to the patient, as well as for the successful building up of his future practice.

607 Sutter street.

SOME NOTES ON THE THERAPEUTIC VALUE OF PYOKTANIN IN MALARIAL FEVER.

By M. SCHNABEL, M. D., Newcastle, Cal.

Having had some success with methylene blue in malarial fever, I concluded to ascertain the value of pyoktanin. I have condensed my experience in the following brief reports of cases in which it has been used:

CASE 1.—M. B——, aged 70, inmate of Placer County Hospital, complained, June 12, of symptoms of intermittent fever. He was ordered sixteen capsules, 2 gr. each, of pyoktanin, one capsule three times a day. June 16 he reported cured, and no relapse has occurred up to June 27. Total quantity taken, 32 grains.

CASE 2.—H. H——, inmate of Placer County Hospital, admitted June 12, suffering from intermittent fever. Patient was ordered sixteen 2 gr. capsules of pyoktanin, one to be taken every three hours. Return of paroxysm on June 14. Return of paroxysm on the 16th, still continued capsules. Return of paroxysm on the 18th, when the use of the drug was abandoned. The total quantity given having been 40 grains.

CASE 3.—J. S——, aged 60, inmate of Placer County Hospital, suffering from malarial fever, June 12. Was ordered twelve 2 gr. capsules, one capsule every two hours during intermission. The result in this case was also negative, and the treatment had to be abandoned June 18, when 20 grains had been taken, on account of vomiting.

CASE 4.—S. M——, aged 35, admitted to the County Hospital June 16, suffering from malarial fever. Patient was ordered one 2 gr. pyoktanin capsule every three hours until sixteen capsules were taken. He reported cured June 20, and up to June 27 there had been no return of the fever. The total quantity taken was 30 grains.

CASE 5.—A——, aged 60, inmate of Placer County Hospital, reported June 18, suffering from intermittent fever. Was ordered one 2 gr. capsule of pyoktanin three times a day. He reported cured June 25, and up to June 27 there had been no return of the fever. In this case 40 grains were taken.

CASE 6.—H——, aged 60, inmate of Placer County Hospital, suffering from malarial fever. June 18 was ordered 2 gr. pyoktanin every two hours. June 20, no effect on the fever. Paroxysm returned 25th and 27th. In this case 44 grains had been given, when the treatment was abandoned on account of vomiting.

CASE 7.—J. McM——, aged 46, native of Canada, admitted to Hospital June 25, suffering from intermittent fever. He was ordered 2 gr. of pyoktanin every three hours. June 27, reported cured, having taken 20 grains.

CASE 8.—McC——, aged 65, admitted June 22, suffering from fever and diarrhea. Had been taking salol with no effect. Was ordered 2 gr. pyoktanin every three hours. Fever and diarrhea reported cured June 27. Total quantity taken, 24 grains.

CASE 9.—M. L——, admitted to Hospital June 12, suffering from malarial fever. Ordered 2 gr. pyoktanin three times a day. Reported cured June 27. Total quantity taken, 60 grains.

CASE 10.—M. B——, aged 6, private patient; first seen June 23, found to be suffering from continued malarial fever. Was ordered pyoktanin in ½ gr. doses every four hours. The drug was rejected by the stomach after each administration. After four or five attempts it had to be abandoned.

CASE 11.—M. C——, aged 20, private patient. Primipara; four months pregnant, suffering from intermittent fever. First seen June 19; had been taking quinine, which at this time threatened abortion. She was ordered, after other appropriate treatment, twelve 2 gr. capsules of pyoktanin, one every three hours. The first capsule was retained one hour, and then ejected from the stomach. The second capsule was retained half an hour. It was tried a third time, with a similar result, when the drug had to be abandoned.

In reviewing these cases it will be seen the drug proved successful in six out of eleven, and failed in five cases. One of the main factors in accounting for this failure is, perhaps, its intolerance by the stomach. While it undoubtedly possesses some therapeutic value in malarial fever, I believe it is inferior to quinine. Perhaps if some combination were effected with it to carry the drug rapidly through the stomach a better result might be obtained.

Pyoktanin may be given a trial in case where quinine has failed. It should be given when there is no food in the stomach, and may be administered as often as 2 gr. every two hours until twelve doses have been taken. The urine is rarely stained by it.

A SUCCESSFUL CASE OF CHOLECYSTOTOMY.

By DUDLEY TAIT, M. D., Visiting Surgeon to the French Hospital, and to the California Woman's Hospital, San Francisco, Cal.

Read before the California Academy of Medicine.

The specimen I present to you to night is from a lady 31 years of age, whose case may interest both the physician and the surgeon, two publications[1] having already been devoted to the first part of its history.

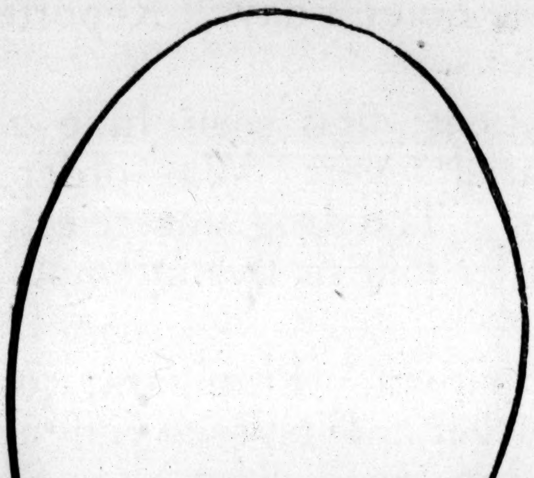
Briefly stated, the history of the case is as follows: In the fall of 1889 she was treated for typhoid fever, but after one week, during which the ice pack was constantly resorted to, a distinguished specialist was called in, who, suspecting pelvic suppuration, promptly opened the abdomen in the median line below the umbilicus, but found nothing of importance. Before closing the wound he very wisely explored the entire abdominal cavity and detected the presence of an impacted gall bladder. Cholecystotomy was immediately performed, several stones removed, and the bladder sutured to the abdominal wall. The patient recovered entirely, although convalescence was somewhat retarded by suppuration of the lower wound.

---

[1] A Year's Work in Abdominal Surgery, Clinton Cushing.

Six months later, an abscess opened spontaneously at the site of the cholecystotomy incision, discharged freely for about two weeks, and closed spontaneously. Since then the patient has been in apparently good health, with the exception of occasional "spasms" or pains in the right side. In the latter part of June, 1893, she complained of very severe pain in the region of the gall bladder, necessitating frequent injections of morphine. At no time has there been any icterus; stones have never been found in the feces.

Upon examination, a distended gall bladder could easily be made out. This was confirmed by an incision under cocain, which gave issue to the colorless mucous fluid characteristic of dropsy of the gall bladder. Probing and attempts at catheterization gave negative results. The diagnosis of obstruction or stricture of the cystic duct thus became evident. Cholecystotomy was performed six days later, in which I was assisted by Drs. Vowinkel and Boyd. The only detail of interest in relation to the operation was the preliminary use of the Paquelin cautery to disinfect the fistulous tract and surrounding superficial tissue, and to arrest a slight hemorrhage from the surface of the lower border of the liver. The numerous adhesions encountered were probably due to the preëxisting abscess. By means of two incisions—one above and one below the gall bladder—a crescentic-shaped portion of the abdominal wall was removed with the bladder, thus comprising all the cicatrical tissue. No drainage was employed. Patient set up on the ninth day, and was discharged on the fourteenth day, union by first intention having taken place.



A—Thickened duct showing calculi.
B—Common duct.

This case tends to substantiate Abbe's assertion that operations can be performed on the gall bladder with greater safety than on the urinary bladder. According to Calot's inaugural thesis (Paris, 1892), the true mortality of cholecystotomy is only 8.9 per cent. While it should be admitted that most cases of cholelithiasis belong to the domain of the physician, the majority of complications arising therefrom call for surgical interference. In the presence of the very flattering and frequently remarkable results of gall bladder surgery reported in foreign and domestic journals, too much stress cannot be laid on the careful clinical analysis of every case of gall stones, especially where the common duct is involved.

Few physicians will share Langenbuch's assertion that all gall stones are formed in the bladder. On the contrary, Knoulsey Thorton's cases of hepatotomy for calculi, and the *post-mortem* researches of Cornil and Durand-Fardel, prove beyond doubt that small calculi may originate in the liver and descend through the hepatic duct. It, therefore, follows that the hygienic and dietetic treatment should not be neglected; all causes of precipitation of cholesterin being eliminated as strictly as possible.

326 Geary street.

THE ETIOLOGY OF YELLOW FEVER.

By **Henry E. Sanderson**, Ph. B., M. D., Assistant to the chair of Principles and Practice of Medicine, Cooper Medical College, San Francisco, Cal.

Read before the San Francisco Medico Chirurgical Society.

History shows yellow fever to be almost exclusively a disease of seaports, and when found elsewhere the disease is usually traceable to a neighboring seaport, other towns on the same coast frequently remaining uninfected during its ravages. In the United States the seaports most frequently visited by the scourge are such as have maritime relations with Havana and other endemic foci. New Orleans, Charleston, Mobile, Savannah, and Galveston have been frequently so visited.

The outbreak of each epidemic of yellow fever is traceable to the introduction of infected persons or articles, while the subsequent development of the epidemic is conditioned largely by the climate and the sanitary state of the locality. It is not endemic anywhere in the United States, although it was once thought to be so from the outbreaks of the disease during summers in which little or no trouble existed elsewhere, and when no evidence existed of its importation from foreign ports.

These instances are explicable upon the theory that the causative factor survived the original epidemic and lay dormant during the winter to awake again in summer when the temperature was favorable, thus inducing sporadic cases, followed by well developed epidemics. Memphis, in 1879, exemplified this statement.

All records, however, point to the introduction of some infectious agent as the ultimate cause of the outbreaks. We are justified in assuming that this infectious agent is a microörganism, and that it resembles the germs of typhoid fever and cholera, in being capable of life and development outside of the human body. A short account of the researches that have been made in the attempt to discover this causative agent, will not be out of place.

In 1879 the United States government sent Dr. George A. Sternberg to Havana, as one of a commission appointed by the National Board of Health, to investigate the etiology of yellow fever and discover, if possible, its germ. Sternberg first examined the blood, thinking that it might be found there, as are the germs of anthrax and relapsing fever, Ninety-eight specimens from 41 undoubted cases were thoroughly studied, and one hundred and five photographic negatives taken, showing everything demonstrable by the microscope. The Zeiss $\frac{1}{18}$ homogenous immersion lens was used, and the results were entirely negative.

Later, he made investigations at Vera Cruz and Rio Janeiro, with culture experiments, using blood from the fingers of patients in various stages of the disease. After washing the fingers with soap and water, then with bichloride solution 1:1000, and finally with alcohol, the blood was introduced (with all the attention to antiseptic details observed in bacteriological work) into culture tubes of agar-agar, meat-peptone, gelatine, serum, and peptone-boullion. Of thirty-four tubes thus inoculated from 5 typical cases, twenty-eight remained sterile, while in the remaining six, various organisms appeared, but no one organism was universal.

"It would not be safe to conclude absolutely from this experience that the blood contains *no* organisms. The solution of this question requires, in addition, a careful study of the stained sections of the viscera, especially the liver and kidney."

When an infectious disease has its microörganism in the blood, this organism can be demonstrated in thin sections of the tissues, especially in cross-sections of blood vessels where the germ may sometimes be plainly seen. Guitéras, another member of the commission referred to, made numerous sections of the tissues with this object in view, but with negative results. However, since the date of these investigations, staining methods have been so much improved that Sternberg went over the ground again; and during the past three years has made a very large number of preparations, chiefly from the liver, kidneys, stomach and intestines of patients the autopsies of which were made within from one to three hours after death. The Loeffler alkaline-methylin-blue solution, the Gram and Weigert's method were employed. The results were negative so far as the general presence of any one organism was concerned.

Blood drawn from the heart was used by Sternberg for cultures, and in 8 of the 10 cases examined gave negative results. Urine drawn from the bladder (through its walls) and placed in culture media was negative in results in 7 out of 10 cases. From the kidney, cultures were sterile in 4 out of 10 cases. The liver cultures in 7 out of 10 cases remained sterile. In those cases in which colonies appeared there were several different microörganisms, the most common form being a bacillus, which appears to be identical with the Emmerich bacillus which was found in cholera cadavers at Naples in 1884.

Sternberg concludes his report as follows: "Can we accept the evidence presented as conclusive regarding the absence of any specific microörganisms from the blood and tissues? Perhaps the germ is ultra-microscopic, or, again, that it will not grow in the culture-media employed."

As to the former question, colonies should form in the culture-media and, moreover, thus far no ultra-microscopic organism has ever been found by bacteriologists. Regarding the second query, no organism has been demonstrated by the microscope as constantly present. All the evidence relating to epidemics points to an organism capable of development in filth-beds, outside of the human body. It may possibly be an anaërobic organism (one which must be raised in a non-oxygen medium) in which case some special method of cultivation must be employed—some method not employed in the Sternberg researches.

The blood of a yellow fever patient has been injected into an unacclimated person without inducing the disease. Sternberg found in the gastro-intestinal canal the same bacillus which he had found in the liver and kidney, but in each case it was in company with quite a variety of other bacteria, both bacilli and cocci. This bacillus gives the same colonies in gelatine as does the Emmerich or bacillus neapolitanus. Examinations of the black vomit gave no one bacterium, but a variety of organisms.

If we, finally, are unable to find any one microörganism, it might be supposed that the germ remains outside of the body and, under suitable conditions of environment, produces volatile ptomäines which are inspired and, in susceptible persons, produce the disease.

The attack may occur within twenty-four hours from the first exposure. It is apparently always contracted from the atmosphere. It has repeatedly been noticed that people, by respiration inside of an enclosure with high walls, fail to catch the disease, while those just outside it become infected, although both live upon the same diet. Again, certain parts of cities remain as foci for the contagium for long periods, while other parts are free, although all have a common water supply.

I will conclude with a brief summary of the microörganisms which have been described as the specific causes of yellow fever up to the present time.

Dr. Freire, of Brazil, in 1885 described a coccus, which he called the "crypto-coccus xanthogenicus," which at first appears as a very small coccus, gradually increases in size till much larger, and then bursts, discharging spores mixed with a yellow substance, which latter he claimed to be the staining substance of the tissues. This is, however, entirely erroneous and fanciful.

Dr. Carmona, of Mexico, described another yellow fever microbe, a micrococcus found in the urine, but it turned out to be an ordinary coccus found in normal urine after it has stood a short time.

Lacerda, at Rio Janeiro, discovered a bacillus in the kidneys and livers of patients, and sent specimens of these tissues to Babes, at Paris, who described "cylindrical grains," arranged in pairs, and forming little groups in which they are united by a pale, viscid substance. Babes afterward renounced his claims.

The "tetragenus febris flavæ," discovered by Dr. Finlay, of Havana, in 1887. He maintained that the mosquito was the agent of transmission of the disease, and that non-acclimatized persons can be protected by inoculations with the mosquito. He afterward withdrew his claims.

Paul Gibier, who was sent by the French government to Havana, described a bacillus, which he thought to be the germ of yellow fever, but it is to be placed on a par with the other supposed specific germs already mentioned.

In conclusion, it may be stated that the germ of yellow fever is not yet known. The various bacteria found in the disease are only occasionally present in the cadavers examined soon after death, and no one organism is always found.

21 Powell street.

FREIRE'S RESEARCHES ON THE ETIOLOGY AND PROPHYLAXIS OF YELLOW FEVER.

By F. A. A. BELINGE, M. D., San Francisco, Cal.

Read before the San Francisco Medico-Chirurgical Society.

Prevention of diseases is the line on which modern medicine is working and striving, and earnest students are patiently endeavoring to uncover the obscure problem of causation of diseases. The new field of research opened up through the labors of Pasteur has attracted the greatest attention and gives promise of the solution of many interesting questions now agitating medical minds.

The recent developments in the study of microörganisms and their relations to disease, are the result of years of patient thought and examination on the part of this quiet, unassuming Frenchman. He has revolutionized the practice of surgery, removed many of its terrors, and greatly enlarged its field of successful operations.

His great and valuable services to medical science well deserved the enthusiastic ovation tendered to him recently in Paris, on the seventieth anniversary of his birthday. The cosmopolitan character of the assemblage of medical celebrities gathered to render him a heartfelt tribute of homage and respect, showed the admiration felt for him and his labors in all parts of the world.

Following in the train of ideas laid down by Pasteur, other experimenters have devoted much time to the study and elucidation of the relations of microörganisms with infectious diseases, and we are indebted to one of his pupils for valuable information concerning the etiology of yellow fever, and the possibility of its prevention by means of inoculative injections of an attenuated virus.

Dr. Domingos Freire, Professor of Organic Chemistry and Biology at the Faculty of Medicine of Rio Janeiro, has devoted several years, under the tutelage of Pasteur, to the study of the etiology and means of prevention of yellow fever. In 1880, he announced that this dread disease was caused by a microbe of very minute proportions, which invaded the blood and the tissues. While continuing his yet incomplete studies, he was charged officially by the Brazilian government, in 1883, with the task of investigating the nature of this malady, of making researches into the attenuation of the virus of its procreative microbe, the vaccination of animals, and the possibility of employing this vaccination as a means of prophylaxis.

In the lecture delivered in Paris, June 7, 1887, Dr. Freire states that in the blood of a person who has recently died, or of an animal inoculated and on the point of death, will be found in considerable quantities a microbe belonging to the micrococci, which he named "cryptococcus xanthogenicus." This microörganism is present in the urine, bile, and all organic fluids and tissues, and shows itself under the form of small points characterized by spontaneous movements, as seen under an enlargement of 400 to 450 diameters. Its morphological features cannot be perceived, however, under less than 780 to 1020 diameters.

Each of these little points constitutes a mono-cellular organism, strongly refractive to light, enclosing a more or less blackish pigment, its diameter varying according to the degree of development in the process of evolution. The smallest do not reach the size of the thousandth part of a millimetre, and the largest, when evolution is complete, contain protoplasmic granulations which become visible when treated with a solution of iodated iodide of potassium. Each adult cell breaks open and lets out its contents, which are the germs for the perpetuation of the species.

Two pigments also exude, one yellow in color, which becomes infiltrated in the tissues and produces the icteric hue seen in this fever, and giving it its name; the other, black and insoluble. This latter, accumulating in the circulatory current, gives rise to capillary obstructions and stases in the parenchyma of organs. Anuria is due in great part to an agglomeration of this microbe and its debris in the urinary passages, as seen under the microscope.

Dr. Freire contends that the black vomit of yellow fever is due to the black pigment. He admits the occurrence of gastric hemorrhages, but states that black vomit is not altered blood, since it may exist without the slightest trace of gastric hemorrhage, but is due to the presence of this black pigment. Scientists now recognize the existence of microbes called chromogenous, which secrete pigments of various tints, as the bacillus cyanogenus, micrococcus prodigiosus, micrococcus indicus, and the microbe of yellow fever belongs to this class of microörganisms.

Dr. Freire calls attention to another important fact concerning this microbe: its property of producing ptomäines at the expense of the albuminoids and other matters on which it is nourished, ptomäines of a very toxic nature, as demonstrated by their remarkable depressing influence on the pneumogastric and sympathetic nerves, through experiments on dogs and frogs.

The microbe of yellow fever may be freely cultivated in neutral gelatine, beef bouillon, milk, etc. In these cultures, as in the tissues, the microbes become united by twos and threes or more, forming extended and flexible chaplets. At the rupture of the mother cell, the newly born microbes, mixed with yellow pigment, become agglomerated into strange forms, like strawberries, raspberries, resemblances more striking as the micrococci become fixed in the yellow, at times red, vein of the pigmentary matter. These pigments form abundantly in the cultures, and their presence has been established by many observers, among whom may be cited Rebourgeon, Issartier, Fernandes, Alvares, and Prof. Artigallis, of Bordeaux. In Freire's experiments as to the transmissibility of the disease, he found that inoculation with a virulent liquid killed rabbits and guinea pigs, and that the sojourn of the animals in an atmosphere tainted with the microbe, as in his laboratory, gave the same result. His next task was the attenuation of the microbe, so as to render it capable of conferring immunity. He observed that, after a number of successive cultures, the microbe lost much of its virulence, and that rabbits and guinea pigs stood inoculation without bad results, experiencing only light fever, emaciation, and other symptoms, which disappeared after a few days. He also found that in a large number of animals thus vaccinated an injection with a virulent liquid made some days afterwards, produced no fatal result, while the same injection killed all animals not previously vaccinated with the attenuated culture.

He prepared the vaccinal liquid as follows: The blood of a patient, dead or dying, was injected into the veins of a rabbit or guinea pig. The blood of this animal was used to inoculate a second animal, and so on to the sixth or seventh; with the blood of the last, cultures were made and transplanted at least four times. Animals were then inoculated with this attenuation, to be certain that no grave symptom would arise, and then he began to inoculate men with it. The disturbances following these injections were intraorbital cephalalgia, chills, general lassitude, heaviness of limbs, rachialgia, fever 37°, 38°. 39° C., epigastric uneasiness, sometimes nausea and vomiting—these symptoms lasting three or four days when untreated.

He gives the results of vaccinations authorized by the Brazilian government in October, 1883. During the epidemic at Rio, in 1883–1884, he vaccinated 418 persons, 307 foreigners and the remainder natives. From October, 1883, to June, 1884, 650 non-vaccinated persons died of yellow fever, 577 foreigners and 73 Brazilians; among the deaths were seven who had been vaccinated. No vaccinated Brazilian died.

From January to August, 1885, at Rio, 278 non-vaccinated persons died; 200 strangers and 78 Brazilians. During this period he vaccinated 3,051 persons, 2,186 natives and 865 foreigners. Of the 2,186 natives, 600 were small children of foreigners, just as receptive as their parents. During the epidemic none of these died.

During the epidemic of 1886, at Rio, 3,473 persons were vaccinated; Brazilians, 2,763; foreigners, 710. Among the 2,763 natives were 489 children of foreigners, all very young and receptive; 222 came from the interior and were just as receptive as the foreigners. The mortality among the non-vaccinated during this period was 1,389; 1,079 foreigners and 310 Brazilians, and seven vaccinated persons. To recapitulate:

Vaccinations in 1884	6,942
Died, non-vaccinated	2,317
Died, vaccinated	15
Vaccinations in 1885	3,051
Died, vaccinated	1
Vaccinations in 1886	3,473
Died, vaccinated	7
Mortality among the non-vaccinated during 1885, 1886	1,667

In a population of about 160,000.

Percentage of mortality among non-vaccinated, 1 per cent.; and among vaccinated, one per 1,000.

We see by these figures immunity by means of inoculation is not absolute, but neither is it in vaccination against variola. The results of Dr. Freire's amaryllic vaccinations are striking, after all previous encounters with this scourge. The benignity of the vaccinations and the almost perfect immunity given, make them a necessity to all strangers in tropical climates along the sea coast. The success of his experiments give us the hope of a future possibility in other zymotic and infectious diseases.

2018 Van Ness Avenue.

A PLEA FOR THE INTRODUCTION OF THE METRIC SYSTEM IN MEDICINE.

By J. MORA MOSS.

Read before the Pi Sigma Tau Fraternity, Cooper Medical College.

Have you ever considered the enormous influence conservatism plays in our life, how onerous is the bulk of useless habits and customs and modes of thought that weigh upon us as a vast burden of unserviceable material. Man cunningly devises many things to render his labor easier, yet often, unerringly obeying one of the most deeply rooted instincts of his nature, he plods along day after day, hardly wandering from the rut of custom. Ought we, scientists, delvers after knowledge and seekers of truth, be bound by this slavish adherence to custom? It took the medical profession one hundred years to adopt the clinical thermometer, and to-day, while just another century has passed since the convenient and elegant metric system was proposed, we are still prescribing medicines in ounces and drachms, that cumbersome and imperfect method whose origin is lost in the mists of antiquity;

In the earliest times men had measured by paces, the length of his arm and thumb, and these had come down to us as yards and inches. The measures of capacity were the handful and the armful; the weights were based on grains of wheat, and these systems are the ones used in the United States and in England to-day. Every nation and province, and almost every town, had a different system. There was one gleam of reason in the inter-relation of the different units. They were so arranged that multiplying or dividing the primary unit by two or three, or some multiple of one or both of these numbers, would give the secondary units. Thus a foot can be divided into halves, thirds, quarters, sixths, and twelfths, and these subdivisions expressed in inches. Our ancestors, having accomplished this, did not proceed further; they were not brilliant enough to arrange their notation on the same principle, but fell back on counting their fingers. Thus to-day we count by tens instead of eights or twelves, and we cannot express in whole numbers either the third, the quarter, the sixth, the eighth, or the square root of our base of notation, although these are subdivisions that we constantly require.

This lack of agreement between our weights and measures and our system of notation is an enormous disadvantage. Anyone can mentally add 50c, 30c, and 25c, and tell at once that the sum is $1.05; but I defy any one to add 50d, 30d, and 25d, and tell off-hand how much that is in shillings. In the same way we know at once that 50 gm. 30 gm. and 25 gm. make 105 gm., but who can similarly tell how much 50 m. 30 m. 25 m. are in drachms? Students sneer at the metric system of weights and measures, yet nothing could induce them to abandon the decimal system of currency for £. s. d.

All mankind use the decimal system of notation and seem irrevocably attached thereto, so that it would be impossible to induce a change to an octonal or a duodecimal system. The French system of weights and measures of a century ago cried aloud for reform as ours does to-day, and as the notation could not be changed, the only chance for improvement lay in altering the weights and measures. The unit upon which the whole system was to be based was the metre, which should be one ten-millionth of the distance of the earth's equator from the poles. The measurements were made, and on June 22, 1799, the system was adopted.

It is now known that the measurements were not correct, and as a matter of fact the metre varies about $\frac{1}{4000}$ from the ten-millionth of a quadrant, so that the real standard is a platinum bar kept in Paris. This is no great drawback, however, for the measurement of the quadrant could probably never be exactly ascertained if the original standard were lost, and its great advantage is its conformance to the decimal system of notation.

The multiples and subdivisions were to be reckoned by tens; multiples indicated by Greek, and subdivisions by Latin prefixes, thus: 10 millimetres equal one centimetre; 10 metres equal one decametre; 10 decametres equal one hectometre. The cubic decimetre is taken as the measure of capacity and is called a litre. The unit of weight is the gramme, and is the weight of a cubic centimetre of distilled water at the temperature of its greatest density, at the latitude of Paris. The multiples are subdivisions of these and are indicated in the same way as those of the metre, but in practice it has been found that most of them are superfluous. Just as the mill, dime and eagle are never used in computing financial transactions, so in the metric system those units having the prefixes milli, centi and kilo besides the primary units are found to be all that are necessary, and the others are never used. The microcopists have added one more to the list by dividing the millimetre into 1000 parts and calling it the micro-millimetre, or microm.

The advantages of the metric system and the disadvantages of the American and English systems are best considered together. The advantages of the metric system may be briefly summarized as: (1) Convenience in reckoning; (2) Interdependence of the units of measure, weight and capacity; (3) Universal use. Let us consider these seriatim.

As to convenience in reckoning, hardly any argument is needed. Our school books are full of such problems as these: "A farmer has two fields, one of which contains 1 acre, 3 roods and 75 rods, and the other 2 acres, 8 rods, and 200 square yards. How much land does he own?" Or, to take a more practical illustration, and one that will strike nearer home: I wish to make a 4 per cent. solution of cocaine; how many grains to the ounce shall I use? Is there any one present who could give me an answer to the first problem after an hour's work with pencil and paper? I doubt it. After spending weeks of valuable time in school, learning the tables, not one of you knows the table of square measure. The ratio of the different units is so complex that we forget them almost as fast as we learn them. If we used the metric system in this country, you would have learned the table in ten minutes and never have forgotten it, and you would then have had the time to devote to something really worth knowing.

The second problem is easy enough, and yet, when it first confronts you, it takes an appreciable amount of time to think it out, while with the metric system the answer would have been instantaneous. I believe that if all the time wasted by our 60,000,000 of people each day, in learning and using the present system, could be saved, it would add thousands of men to the productive resources of the country.

Under the head of interdependence of the standards of measure, weight and capacity, I will bring the advantages of the metric system home to you by mentioning some facts that have stuck to me out of all the mass of similar knowledge I once learned and then forgot. One gallon contains 231 cubic inches. This I forgot and relearned many times before it became fixed in my memory, but when I found that 1,000 c.cm. made 1 litre I never forgot, and had I done so it could easily have been recalled. There is, however, nothing to recall 231 cubic inches. I also painfully learned that a cubic foot of iron weighs 490 pounds, and that the specific gravity of gold is 19. But I could not now tell the specific gravity of iron, because I have totally forgotten how much a cubic foot of water weighs. I could not tell how much a cubic foot of gold weighs, because I do not know the bulk of a pound of water. It would take a tedious computation to find this out, but in the metric system one of these facts puts me in possession of the others. From the fact that a cubic centimetre of water weighs one gramme, I know at once that a cubic centimetre of gold weighs 10 grammes.

While practically all the rest of the world has adopted the metric system, England, Russia, and the United States are the only countries of any importance in which it is not in common use. The South American Republics adopted it 36 years ago, and we are just that far behind the times. We have got a little further in advance than England—an Englishman never knows his weight in pounds; he weighs himself in stones of 14 pounds each, and will tell you that he weighs "11 stone 10;" but when he buys a stone of butchers' meat he gets 8 pounds; and a stone of glass weighs 5 pounds. His hundred weights are 112 pounds each; and as a curious piece of information I append the following from Whittaker's Almanac for the current year under the head of "Fish Measure," which occupies as honorable a place as avoirdupois weight or long measure:

"Herrings are sold by the cran, containing 26⅔ imperial gallons, on the East Coast of Scotland, from Shetland to Berwick, also at Castle Bay and Stornoway; but on the West Coast, Isle of Man, and in Ireland by the maze, which contains 5 long hundreds of 123 each." We may smile, but as long as we use a different system of weights for potatoes, diamonds, and mercurial ointment, we had better not say much.

The chemist and the physicist have used the metric system for years—to the physician in this country it is almost unknown. It is said that medicine is the last of the sciences to feel the impulse of modern progress. Upon us fellow students will one day devolve the task of maintaining the honor of our profession. We are here but few in number. Let each man be a missionary of reform and progress, and he will have performed a part of his duty.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M. D., Sacramento, Cal., and

HENRY GIBBONS, JR., M. D., Professor of Obstetrics and Diseases of Women, Cooper Medical College, San Francisco, Cal.

Treatment of Cystalgia of Uterine Origin.—Cystalgia is a frequent complication of uterine affections, especially of endometritis and endocervicitis, displacements, and fibroid tumors. As the uterine disease giving rise to cystalgia usually requires prolonged treatment, it is well to first relieve the vesical trouble, often the most painful symptom. The therapeutic indications are as follows: (1) To overcome painful spasm of the vesical muscle. (2) To relieve the catarrhal condition which nearly always accompanies and increases cystalgia. (3) To diminish irritability of the genito-spinal centre. Belladonna, hyocyamus, bromides of amonium, potassium, and sodium are useful in vesical spasm, but the desired end is most surely and rapidly attained by bromide of camphor, used according to the following formula: Bromide of camphor, 2 grammes, in 20 pills; one every 4 hours, but never more than four pills a day. Tincture of thuja occidentalis, which is in great part eliminated by the urine, soon modifies catarrh of the urinary passages. Thirty or forty drops a day may be given, in doses of 10 drops, in a little water. A mild revulsive to the lumbo-sacral region, by means of small fly blisters, or by applications, two or three times a day, of a liniment composed of chloroform 10, ether 15, spirits of camphor 90 grammes, will suffice to control genito-spinal irritation.—*Journal de Médicine de Paris*, August 20, 1893.

Complications of Utero-Vaginal Prolapsus.—Among the numerous pathological conditions which may exist with utero-vaginal prolapsus, and which should modify its habitual treatment, are: (1) Metritis. (2) Salpingo ovaritis. (3) Periuterine adhesions. (4) Uterine or periuterine tumors. The diagnosis of prolapsus is easily made, and the complication may be recognized by its usual signs. The therapeutics must be modified by and combined with the treatment of the complication. (1) *Metritis.*—It is not desirable to have immediate recourse to hysteropexia, which may relieve prolapsus, but not the inflammatory condition. We should first subdue the inflammation, and then treat the prolapsus. But in moderate cases it is preferable to perform curettage with circular sub-vaginal amputation of the cervix and colpoperineorraphy at the same time. We thus cure the inflammation and the lightened uterus returns to its normal position, where the fortified perineum will generally maintain it, or at least permit the application of a suitable pessary. (2) *Salpingo-ovaritis.* If the inflammation of the annexes is slight, treat it as though it did not exist; if severe enough to indicate castration, perform laparotomy, remove the annexes, and fix the pedicles in the abdominal walls; hysteropexia is thus achieved. (3) *Adhesions.*—Adhesions are a favorable rather than an unfavorable complication, as they serve as ligaments to the prolapsed uterus. They are only unfavorable when hysteropexia becomes necessary, and they must be ruptured before attempting uterine fixation. (4) *Uterine or Periuterine Tumors.*—If the tumor is uterine, total oblation of the uterus by the vaginal method is indicated; if periuterine, removal through the abdomen and hysteropexia.—*Bulletin Général de Thérapeutique*, June 30, 1893.

Treatment of Chronic Cervical Endometritis in Nulliparæ.—M. BONILLY recommends the following operation in the glandular endometritis of nulliparæ: Dilate the uterus for two days. After thoroughly washing and scraping the cavity, fix the superior or anterior lip of the cervix, and remove, with a long and narrow bistoury, from the demi-circumference of each lip, a piece 2, 3, or 4 millimetres thick, according to the depth of the lesions. Two grooves are thus formed, with their concavities opposite each other. We must be careful to preserve a bridge of membrane on the sides of the cervix to serve as the beginning of regeneration. The cervical cavity may then be filled with iodoform gauze. Slight hemorrhage sometimes follows, necessitating careful tamponning. M. Bonilly has performed this operation forty times, with the best results in all but one case.—*Bulletin Général de Thérapeutique*, June 30, 1893.

Glandular Catarrh of the Cervix.—M. TERRIER believes that after ablations of the cervix, microbes penetrate, through the mucosa, to the muscular tissue. He fears that the two lateral tongues of mucous membrane left in Bonilly's method, serve as foci for relapse. In the opinion of M. RENIER, catarrh of the cervix depends upon some general condition, such as *lymphatissime.* It is frequent in patients suffering from chronic blepaitis, glandular angina, and various other manifestations of *lymphatissime.* Microbes are not the only pathogenic agent in its production. Dilatation of the cervix gives excellent therapeutic results, and salt baths are an important means of fortifying the constitution.—*Bulletin Général de Thérapeutique*, June 30, 1893.

Removal of Uterine Fibroids of Moderate Size by the Vagino-Abdominal Method.—All physicians agree that abdominal hysterectomy is the operation indicated in large fibroid tumors extending above the umbilicus. In small fibroids some operators always practise total ablation by the vaginal method, and others advise castration when there is hemorrhage without compression. There is still further room for hesitation when the tumor is of moderate size. Abdominal hysterectomy is generally impossible on account of adhesion, shortness of the broad ligaments, and absence of pedicle, while castration, sometimes easy on both sides, is often impossible on one side, and sometimes on both. Ablation of Péan's method is frequently difficult or impossible when the tumor, more abdominal than pelvic, cannot descend into the pelvis. Total removal by the vagino-abdominal method is not a new operation, having been advised in 1830 by Delpach, accepted in 1880 by Freund, and afterward by Köberle, who performed it on two occasions. It consists in removing the cervix by the vaginal method, and the rest of the growth through the abdomen. The uterus, no longer held to the pelvic floor by the short lower part of the broad ligaments, may be completely withdrawn from the abdominal walls, when nothing is more easy than to separate and tie the broad ligaments. Dr. CHAPUT has performed this operation in three cases, and, although death occurred in one, he believes it to have been caused by disobedience to his orders.—*Journal de Médicine de Paris*, June 4, 1893.

Vaginal Hysterectomy in Periuterine Suppurations.—DR. LAFOURCADE, from his comparison of the results of vaginal hysterectomy with those of laparotomy in this class of diseases, concludes that the former method is more benign and curative than the latter; that it is the only one advisable in diffuse suppuration of the true pelvis in pyosalpinx, in abscesses of neighboring organs, and in relapses after laparotomy; that it should be employed in tubercular uni-lateral pyosalpinx, although laparotomy is generally indicated in unilateral lesions; that secondary vaginal hysterectomy is always preferable after the failure of posterior elytrotomy, and it is less dangerous than laparotomy in small bilateral and enucleable abscesses.—*Journal de Médicine de Paris*, July 16, 1893.

SURGERY.

By T. W. HUNTINGTON, B. A., M. D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal.,

J. F. MORSE, M. D., Surgeon German Hospital, San Francisco, Cal., and

G. F. SHIELS, M. D., C. M., F. R. C. S. E., Surgeon Polyclinic, San Francisco, Cal.

On the Changes in the Spinal Cord after Amputation.—DR. EMIL REDLICH says (*Centralblatt f. Nervenheilkunde und Psychiatrie*): It is a question of very considerable interest to determine in how far the facts agree with the dogmatic statement, that in the nervous system, section of a nerve fibre leads to changes of that portion only which is separated from its nutritive centre. There are, of course, two processes which may be fairly distinguished, viz., active degeneration and the atrophy following long-continued disuse. A good deal of evidence tends to show that in the case of persons living a long time after amputation of an arm or a leg, there is a diminution in size and a change in the structure of the nerve trunks and the nerve centres, thus mechanically thrown out of function. Bearing on the nature of this change, whether it is an atrophy from disuse or an active degeneration, we have the above mentioned observations of our author. Amputation at the thigh was effected in six young Guinea-pigs; they made a perfect recovery and were then killed from seventeen to seventy-six days after the operation; and the nerves concerned, together with the associated portion of the spinal cords, were examined by means of Marchi's osmic method. The usual signs of degeneration were found both in the nerve trunks and in the cord. The changes were most noticeable in the ventral roots and cells of the ventral horn; here, it was the lateral group of cells on the same side which was most affected, while in the horn on the side opposite to the lesion there was also indication of degenerative change, though in a far less degree. In the six animals which had lived from thirty-six to seventy-six days after operation, the dorsal roots, at their entrance into the cord, showed, on the same side, slight degeneration, which, however, could not be followed further into the dorsal horn. On comparison, it was found that these appearances were confined to that region in the cord which was directly associated with the lost limb. Comparing, now, the conditions in man, the author examined eight spinal cords in individuals who had suffered amputation from three weeks to three years before their death. In this material, the signs of degeneration, so evident in the Guinea-pigs, were not present. In comparing the two sets of results, it must be remembered that the Guinea-pigs were all of them young, and that these degenerative changes occur most easily in very young animals; that in the human material the youngest individual was a boy of sixteen years, who had been amputated a year before, and whose case was complicated. Of course, the evidence would be more satisfactory if some of the Guinea-pigs had been allowed to live for a longer time, in order to determine the final outcome of the changes following the amputation; and, also, if the possible initial disturbance occurring in man could have been tested on more cords at periods from three to six weeks after amputation. If we may infer from these data, the changes in the spinal cord in old amputations are probably due to an atrophy following disuse, it remains for the pathologists to determine whether or no this is a slow form of the same process which is designated as degeneration in Guinea-pigs.—*Journal of Nervous and Mental Disease*, September, 1893.

The Sclerogenous Method of Treating White Swelling.—DESGUIN states (*Ann. et. Bull. de la Soc. Méd. d'Anvers*) that no method of treating recent white swelling is comparable to the sclerogenous method of peripheral injections, a cure being obtained on an average in a period of six weeks. Motion is preserved, in contradistinction to the old methods which aimed at ankylosis. In joint trouble with suppuration, the treatment restricts the tuberculous process and places the joint in the most favorable condition for surgical interference. Whatever may be the age of the lesion, the treatment is followed by rapid and considerable diminution in the pain. The joint which has been cured is not more liable to a fresh attack than others.—*American Journal of Medical Sciences*, September, 1893.

Total Extirpation of the Tongue, and Its Effect on the Speech.—AF. SCHULTÉN (*Deut. Zeitchr. f. Chirurgie*, 1893, Band xxxv., Heft 5 u. 6) opposes the teaching of Louis, Butlin, and most other writers, who hold that the loss of the tongue has little or no effect on the speech. In partial extirpations of the tongue it is true that articulation is but little interfered with, but it is a very different matter when the tongue is completely removed. Jussieu's case, in which there was congenital absence of the tongue, and yet speech was not interfered with, does not contradict the statement just made. In this instance the condition was physiological, and, besides, the tongue was represented by a nodule, the muscles at the base of the tongue having a certain degree of development. The author reports the case of a woman, thirty-two years of age, whose tongue had been partially removed for sarcoma, and totally extirpated later on account of a recurrence. Although her companion could understand her after the second operation, Schultén could not. The patient was obliged to construct a different language, substituting sounds she could make for those that were lost. Articulation was, of course, impossible.—*American Journal of Medical Sciences*, September, 1893.

Is an Ectopic Testicle Worth Having?—Surgeons are divided in opinion as to the propriety of endeavoring to preserve testicles the descent whereof into the scrotum has necessitated operative interference. It has for years been assumed, though on what evidence we have no means of knowing, that undescended testes are not more useful than they are ornamental, and they have accordingly been remorselessly snipped off when, owing to the coexistence of a hernia, or inflammation of the retained organ, an operation has been thought necessary. The real reason why surgeons adopt this course is probably because it has hitherto been found impossible to secure the testicle in a comfortable position inside the scrotum, in spite of much ingenuity in, and variety of, procedure. Now that the problem of bringing down and retaining the testicle has been to some extent solved, the question of whether or not the game is worth the candle comes up afresh for discussion. It is pointed out that, after all, no accurate and reliable data have been obtained or are attainable, in support of the theory of the functional worthlessness of the undescended testicle. It is at most a matter of surmise, and the surmises ought to be in the other direction. Most patients, if consulted, would unhesitatingly prefer to have two testicles, provided no additional risk were involved, and their esthetical love for symmetry ought, as far as possible, to be respected. Moreover, the absence of a testis might seriously impair the chances of a candidate for the public service, in the army especially, where the uniform is tacitly taken to imply a certificate of *testiculous habet.—Medical Press and Circular.—Medical Record*, August 12, 1893.

The Pathogenesis of Hepatic Abscess.—ZANCAROL (*Revue de Chirurgie*), states that he has proved by experiments on animals that dysentery and hepatic abscess are affections of the same nature, and that the pathogenetic factor of this complex morbid condition is a microörganism. A clinical experience of twenty-five years has convinced this author that the pus of an hepatic abscess is not less deleterious than that of other suppurating organs, and, also, that dysenteric and hepatic abscess are closely associated, so that, though one may not be the cause of the other, both affections are produced by the same toxic agent. In order to establish these conclusions on a scientific basis, Zancarol instituted a series of experiments on cats, the results of which show that both dysentery and abscess of the liver can be transmitted from man to these animals by injections of the pus and intestinal excretions, and that histologically the lesions in the human subject and those artificially produced in the animal are of a like nature. Hepatic abscess, it is asserted, has a microbic origin, the principal factor being the streptococcus. It remains to be settled by future inquiry whether other organisms apart from the streptococcus are capable of producing a similar morbid condition, or whether this organism is the special originating agent of the hepatic affection. Dysentery is regarded as an affection of the same nature as hepatic abscess, its pathogenetic agent being the streptococcus. As to the amebæ which are so often met with in the fecal discharges even of healthy individuals, these organisms, the author holds, play no part in the causation of dysentery and hepatic abscess. The streptococcus in most instances passes from the intestine to the liver either by the portal vein or the general circulation.—*British Medical Journal*, September 9, 1893.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M. D., Sacramento, Cal.

The Removal of Calcareous Concretions from the Cornea by Chemical Means.—DR. A. BIRNBACHER reports two cases of chalky concretions removed from the cornea by means of a 5 per cent. solution of hydrochloric acid. In both eyes the deposit was immediately beneath the epithelial layer of the cornea. The epithelium was rubbed off with a brush and a 5 per cent. solution of hydrochloric acid brushed directly on the calcareous deposits which cleared the cornea in the parts previously opaque. The excess of acid is neutralized by a soda solution. In both these cases the corneal epithelium was quickly restored and the corneas were clear. This would not take place, however, if the calcareous concretions were in the deeper corneal layers.—*Klin. Monatsblätter f. Augenheilkunde*, June 1893.

Two New Operations for Obstruction of the Nasal Duct with Preservation of the Canaliculi.—DR. G. M. CALDWELL has, on account of the imperfect results following treatment of obstruction of the nasal duct by the prevailing methods, tried treating it and preserving the lachrymal duct intact. He performs the operation as follows: A small probe is passed through the upper canaliculus, well into the sac, and held in position by an assistant; the tissues at the inner canthus are made taut by pressure against the side of the nose and a small incision is made from the inner extremity of the inner canthus inward and backbackward directly into the sac upon the probe. A suture should be taken through the wall of the sac and the inner margin of the wound, the ends being left long for traction to facilitate the entrance of a dilating probe. The nasal duct should now be probed, and the stricture located, which is then divided with a narrow, probe-pointed knife. Dilatation should be carried directly to No. 12, if the duct will admit it with gentle pressure. Then the duct should be irrigated with boric acid solution. If the stricture is slight, the sac may be allowed to close at once; if not, the wound should be kept open by a fragment of rubber tissue, while the duct is dilated every three or four days until the wound in the duct is healed. In a few cases, when the inferior turbinated is small and high, it is possible to explore and to dilate the nasal duct by way of the lower opening in the inferior meatus of the nose. The probe used for this operation is made by Tiemann & Co., and consists of a wire staff, eleven centimetres long, with a central plate for convenience of handling. On each end is a bullet-shaped tip, one centimetre long, with conical points, parallel sides, and abrupt shoulder. The tips are graded in size, each unit representing one quarter millimetre of diameter. A set consists of seven double ended probes, numbered from 1 to 14. In those cases, in which in spite of, or on account of, long continued passage of large probes, the duct has become hopelessly closed by fibrous or bony growths, and in fracture, caries and persistent dacryocystitis, and in all cases in which obliberation of the sac is usually practised, it will be found that by tapping the nasal duct in the middle meatus the function of the tear duct may be preserved. This is best done by an electric burr, after passing a probe into the duct as far as the stricture. The incision should be made at the seat of the stricture, as indicated by measurements, and enlarged upwards as far as necessary. In two cases of bony closing, in which the author used this treatment, a complete cure resulted.—*New York Medical Journal.*

Purulent Nasal Discharge in Children.—DR. JAMES B. BALL reports a series of 51 cases of purulent or muco-purulent, or inspissated pus crusts from one or both nostrils of children under fifteen years of age, which he has grouped according to their cause. Twenty seven cases belong to the first group, and may be classed as chronic rhinitis with purulent secretion. The ages of these children varied from one to fifteen years, most of them, however, occurring between four and nine years. In 3 cases the disease began with an attack of measles.

Many of the children were what would be described as strumnous. Intranasal examination revealed congestion and turgidity of the mucous membrane and the presence of secretion in the nasal passage. The most important fact to be noted in connection with this group of cases is, that in a great majority of them, adenoid vegetations were present in the naso-pharynx. Adenoid vegetations must, therefore, be considered the great predisposing cause of chronic purulent rhinitis in children, and as accounting for the great prevalence of the complaint at this period of life. The next group consists of 9 cases of inherited syphilis, affecting the nose. Three of these are cases of coryza in syphilitic infants, attended with purulent discharge. Snuffles of syphilitic infants is not always attended with purulent discharge, but not infrequently it is so. A chronic purulent discharge from the nose of an infant should always suggest syphilis. These children, however, usually have other signs of syphilis. The other six cases of this group are instances of late inherited syphilis affecting the nose. It is of extreme importance that these cases are recognized early, owing to the serious destruction and deformity which results if neglected. The symptoms usually begin between three or four years of age and puberty. In some cases the nasal destructions follows coryza of infancy. The first symptom is usually some nasal obstruction, with increased secretion, and the case is regarded as a chronic cold. After a time the discharge becomes purulent, offensive, and perhaps blood-stained. Even in this condition the nature of the disease is often not recognized until the discharge of bony sequestra, or shrinking of the external nose awakens attention to the serious nature of the disease. The next group consists of 5 cases, especially peculiar to children, in which the discharge affects one nostril only. These were all due to foreign bodies being present. Three of these cases had been overlooked by various practitioners without the nature of the disease being discovered. One-sided purulent nasal discharge in a child should make one suspect a foreign body and lead to careful examination with a speculum and probe. The next group of 8 cases of simple ozena, which is not common in children under eight or nine years of age. It grows more common after puberty and among females. The characteristic condition of this disease is the formation of crusts in the nasal fossæ. The breath of the patient has a marked offensive, sickly odor. Ulceration is not present, but the the mucous membrane and the turbinated bodies are atrophied. Two other cases, which complete the list of 51 cases, were one-sided purulent fetid discharge from disease of the antrum. This is a rare condition in young children. From the varied diseases which produce the purulent discharge, it is obvious that one should make a careful examination of the nasal cavity in all such cases and not content ourselves, as is often done, with ordering some wash or spray.—*Medical Press and Circular*, June 21, 1893.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. Simmons, Jr., M. D., Sacramento, Cal.

Treatment of the Tineas.—The question of the treatment of the tineas continues to engage much attention in France. Scarcely a month passes one might say without the appearance of a fresh communication on the subject. Dr. Hallopeau advises at the present time for the cure of alopecia areata frictions with essence of wintergreen with the addition of equal parts of ether. In this strength and under this form the essence of wintergreen is in no wise irritant-provoking neither pain nor redness of the tissues and gives off a pleasant odor.

It thus presents all advantages. It has given remarkable results in the author's hands and has seemed to him much more efficacious than the essence of Chinese cannella. This substance seems to act only by its paraciticide qualities which are well known; which proves that we can arrest the extensive spread of alopecia and cure it by simple paraciticides, that the irritant effect is not indispensable in order to obtain these results, contrary to the view of very many authors. Dr. Butte, in a very interesting work, has given precision to the indications for iodized collodion in the tineas. In alopecia, iodized collodion does not seem to him to be effective except in the achromatic forms; and where there still exist only a few patches of alopecia, sharply limited in extensive alopecias of long standing, in the form of alopecia decalvans, its action does not seem to him superior to that of the ordinary forms of treatment. He thinks that frictions twice a day with oil of cade succeed in general better in all cases of alopecia, without exception. Dr. Butte recommends, especially, the use of iodized collodion in tinea tonsurans. This is what he says: "In all cases where epilation is judged necessary, several layers of the following preparation are to be spread over the plaques of trychophytosis, extending at the least a centimetre over the healthy border:

Alcohol at 95°	gm.	12
Metallic Iodine	cg.	.75
Dissolve and add Collodion	gm.	35
Venice Turpentine	gm.	1.50
Castor oil	gm.	2

We can also employ the following formula:

Alcohol at 95°		
Ether	āā gm.	5
Metallic Iodine	cg.	.50
Collodion	gm.	30

During the following four or five days this application is made daily until the layer is quite thick, adhering closely, and presenting no longer any cracking." After a fortnight, the margin of the coating is raised up and the hairs to which it adheres are cut with scissors and then the whole is pulled off with the fingers. That part of the coating which was in contact with the scalp is found covered with a great quantity of little hairs which adhere closely to it. The plaque of trichophyton is then washed with solution of sublimate, 1:500. There is then to be applied an ordinary dressing, and at times we obtain cures without the need of going back to a second course of the iodized collodion. Dr. Hollopeau employs, also, the iodized collodion, 1:30, in tinea tonsurans. He applies it during four days in succession, then for three days he puts on vaseline, and so *en suite*. It is well to recall that for a long time the same author has advised for tinea tonsurans constant applications upon the scalp of iodized vaseline, 1:100. Dr. Augagneur, of Lyon, has quite an original idea, but which it is permitted, until more ample information is forthcoming, to suspect of not being well founded in a practical sense. Having noticed that trichophyton tonsurans can no longer vegetate upon the scalp of adults, he has conceived the idea that by the injection of testicular fluid according to Brown-Séquard's process, an artificial puberty could be created in infancy. He has carried out a series of such injections in sickly infants affected with tinea and has believed he has noticed that the condition of the scalp has often improved at the same time as their general condition.—*Journal Cutaneous and Genito-Urinary Diseases*, September, 1893.

Treatment of Psoriasis by Thyroid Extract.—BRAMWELL has been led to try the treatment of psoriasis by the internal administration of thyroid extract by the very remarkable results with regard to the nutrition of the skin which he had already obtained in cases of myxedema and sporadic cretinism. In the first case of myxedema which he had treated by the thyroid extract there had been in course of treatment profuse desquamation of the skin of the palms of the hands and soles of the feet, and he had noticed the same phenomena to occur in the subsequent cases submitted to the same treatment, which comprised eleven cases of myxedema and three of sporadic cretinism. The following cases showed that he was justified in expecting that a similar desquamative effect would be produced by the thyroid extract in cases of psoriasis. Case I. Admitted on January 13, 1893. The disease was of nine months' duration; was general over the whole body. The crusts were thick, and the subjacent skin presented a very red, angry appearance. The general health was good, but drug treatment and baths had entirely failed to influence the psoriasis. On February 4 treatment by thyroid gland was commenced, half a gland being given daily. By the 10th there was a decided improvement, and on the 14th it was noticed that the crusts on the back were being shed in large scales. leaving smooth skin underneath. By the 16th all the angry, red appearance of the skin had disappeared, and by March 3 the cure was nearly complete. On April 1, there being an apparent arrest in the improvement, the thyroid treatment was suspended and arsenic given, but with disastrous results. The rash at once reappeared. On April 11 treatment was resumed, 15 minims of Brady & Martin's extract being given daily. In three days there was again marked improvement. By May 3 there was nothing left save a slight pigmentation of the skin, and on weighing it was found that the patient had gained fourteen pounds in weight. He was discharged cured on June 6. In Case II, the disease was equally extensive and of seven months' duration. This was treated by thyroid extract only. On May 10, 5 minims were given. On the 11th the patient already found her arm less stiff and irritating. On the 12th the inflammation was possibly less. On the 13th large scales began to separate, but the appetite failed. By the 15th this was quite restored, and the improvement not being as rapid as desirable, the dose was doubled. From this time the improvement was rapid, and the patient was discharged cured on July 14. In Case III, the disease had been of six and a half years' duration, and notwithstanding the previous failure of all other treatment, after six weeks of thyroid treatment the patient was practically cured. The author had treated several other less severe cases, and, save in two instances, with complete success. In one of the failures, the patient, an epileptic, was taking large doses of bromides all through the thyroid treatment, and this may have accounted for the failure. He also knew of another failure in a friend's practice. He had also tried the treatment in a case of lupus, with considerable improvement. He hopes for equally good results in cases of acute eczema. In the discussion which followed, DR. SIMONS ECCLES mentioned that he had seen a case of obstinate psoriasis improve remarkably as a result of the administration of Pöhl's spermine. He suggested that the action of all these animal extracts might be, as Pöhl thought, due to an oxidizing influence on the tissues.—*Therapeutic Gazette*, September 15, 1893.

The Clinical Aspects and Pathological Anatomy of Chronic Urethritis and Blennorrhagic Prostatitis.—DR. E. FINGER, of Vienna, considers (*Internationales Centralblatt f. d. Phys. u. Path. d. Harn. u. Sex.-Org.*) that chronic urethritis is a "focus" process which runs its course in the subepithelial connective tissue hypoplasia. Affection of the epithelium and glands is either a complication or a sequela. The foci of chronic urethritis are most often localized in the pendulous portion, the bulbous portion, or the prostatic portion of the urethra, the membranous portion enjoying a relative immunity from the chronic process. The foci of chronic inflammation are situated in the mucosa and the subepithelial connective tissue of the posterior portion in one set of cases, while in a second set the foci invade by continuity the submucous tissue, in the anterior portion the periurethral and cavernous tissue, in the posterior portion the prostate. In this way complicating chronic processes arise, in the anterior urethra, chronic periurethritis and cavernitis, in the posterior, chronic prostatitis. We have, therefore, anatomically speaking, the following forms of chronic urethritis: (1) Chronic anterior urethritis. (*a*) Chronic anterior urethritis involving the mucous membrance superficially (superficialis). (*b*) Anterior chronic urethritis involving the deeper layers. (2) Chronic posterior urethritis. (*a*) Chronic posterior urethritis superficialis. (*b*) Chronic posterior urethritis involving the deeper layers, *i. e.*, chronic prostatitis. Mixed forms may also be present.—*International Medical Magazine*, September, 1893.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M. A., M. B., C. M., Professor of Clinical Medicine, University of California, San Francisco.

Intravenous Injections of Corrosive Sublimate.—JEMMA, having obtained excellent results from the intravenous injection of corrosive sublimate, as practised by Bacelli in some cases of cerebral syphilis, was tempted to try it in some other diseases, on the ground that at present more importance is attached to the neutralization of the poisonous products of microörganisms than to the latter themselves. He accordingly injected corrosive sublimate into the veins of six patients suffering from typhoid fever, one from erysipelas, one from rheumatic fever, and one from tuberculosis. While the cases are too few to admit of positive conclusions, the indications are that the injections are not followed by any bad results, and in typhoid fever they appeared to be beneficial. The injections consisted in from one to four milligrammes of corrosive sublimate dissolved in sterilized water.—*British Medical Journal*, June 24, 1893.

Subcutaneous Injections of Salol in Tuberculosis.—GROSSI, in early cases of tuberculosis, recommends subcutaneous injections of salol, as follows: Sterilized almond oil, minims, 900; salol, grains, 150; and of the solution thus prepared, at first one, and afterwards two to three daily injections, of 75 minims each, should be made. The results were diminution of night sweats, decrease of cough, a smaller quantity of bacilli in the sputum, improvement in strength and general condition. Locally, the injection is followed by induration of the skin.—*British Medical Journal*, July 22, 1893.

Treatment of Erysipelas.—DR. CHURILOFF, in a preliminary communication, describes the treatment of erysipelas by means of chlorophenol or bromophenol. The antiseptic value of these substances had been proved by experiments made by him, in conjunction with DR. KARPOFF, which showed that solutions of them, of the strength of 1 to 2 per cent., exercise as distinctive an influence on the virus of anthrax and tetanus as does a 5 per cent. solution of carbolic acid. The preparations used in the observations on syphilis were 1 and 2 per cent. ointments of para-chloro-phenol and ortho-bromo phenol made into vaseline. The former of these substances occurs in a crystalline form; it has a special odor, similar to that of carbolic acid; water readily dissolves 2 per cent., while in alcohol, ether, and alkalies, it is very soluble. Ortho-bromo-phenol is a dark violet fluid which dissolves freely in water, alcohol, ether, or alkalies; it emits an odor of carbolic acid, but less so than para-chloro-phenol. The ointment was gently applied to the affected locality twice daily, the inunction lasting about a minute each time. A slight smarting sensation was produced, which passed away in two or three minutes without leaving any traces. No ill effects were observed. This was the only treatment employed, no antipyretics or other drugs being given at the same time. In some cases the redness began to diminish after the second application, the temperature at the same time falling to normal, or nearly so, and the disease showing no tendency to spread. Only one of the twenty cases lasted as long as eight days; all the others recovering in from three to six days. Desquamation was always less marked than when other methods of treatment were employed, and none of the cases developed phlegmonous tendencies. Altogether, Dr. Churiloff thinks himself justified in recommending a trial of this method, which he is himself experimenting upon in the treatment of some other infectious diseases.—*Lancet*, May 27, 1893.

Ozone in Diphtheria.—DR. IRVING S. HAYNES reports the treatment of 7 cases of diphtheria, with cure in each case by therapol—a new ozone preparation. The therapol was applied with a swab, when the diphtheritic membrane was located on the tonsils or pharynx, and with a syringe when it was in the nose. The applications were made every hour, or less frequently as condition required. All of the cases were severe, and the author believes the fact that all recovered was due to the use of this new remedy, aided by other proper constitutional and local treatment.—*New York Medical Journal*, July 15, 1893.

Cocaine and the Milk Secretion.—GUÉNEL reports that in treating a case of cracked nipple, with a 1 in 50 solution of hydrochlorate of cocaine, he found that the secretion of milk was stopped by the application. The breasts became flaccid, and the nipples lost their erectility. The function of the breast was restored on discontinuing the use of cocaine.—*British Medical Journal*, April 1, 1893.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M. D., Demonstrator of Pathology, and Adjunct to the Chair of Clinical Medicine, Cooper Medical College, San Francisco, Cal.

Graphospasmus.—DR. R. H. ANDERSON considers this term faulty. It refers to a chronic disease characterized by the occurrence of spasms when attempt is made to execute a special and complicated movement, the result of previous education, such spasm not following muscular action of the affected parts when special movement is not required, and does not signify the exact abnormal condition which involves incoördination more than it does spasm. Benedict calls this and analogous affections the professional neuroses of coördination. There are three different forms of the affection: (1) Spastic. (2) Paralytic. (3) Tremulous. The difference in the varieties is rather of degree than kind. In a typical case, the clinical history is about as follows: A period of over exertion of the hand, coupled usually with anxiety of mind, the muscles become fatigued, the writing changes in character and becomes irregular; finally the muscles refuse to do their work, they do not coördinate in movement, and other muscles are called into action. Normally, in writing, the supervision of the higher centres ceases and writing becomes automatic, but when the above disability occurs the attention must again be directed to the act. The affection is often a forerunner of more serious diseases, either of the nervous or other systems. Regarding the etiology of this affection there are many theories which may be divided into centric and peripheral or myopathic. The author believes in the central origin of the affection, and locates it in the cerebellum; he believes that in this region there are distinct focal centres of coördination. The prognosis in regard to cases which become chronic is not good. A large percentage never recover the normal use of the hand. In the acute form rest will cure a good many cases. Bardsley recommends sleeping on an inclined plane, the head of the bed being 12 inches higher than the foot. This method is not very successful. Nussbaum has invented a kind of bracelet, to which the penholder is attached, to be worn during writing, which is effective in acute cases. Regarding electricity, galvanism only should be used; all strong currents must be avoided. Apply the positive pole stabile to the brachial plexus and to the different nerves and muscles for five minutes at a time, the negative pole remaining at the cervical vertebræ. Hypodermics of strychnine or atropine injected into the muscles will be of benefit. Two methods of treatment are described as original with the author. (1) A surgical operation by which some of the flexors of the carpus can be divided, union between the belly of one muscle and the extremity or tendon of another being obtained. While this operation will distort the anatomical relations, it will have a tendency to prevent the incoördination. (2) The following apparatus has been devised: Five bands of soft leather are made to buckle on the affected extremity, two on the arm, and three on the forearm, the upper band being situated about the insertion of the deltoid muscle, and prevented from slipping by means of a small strap attached to a shoulder brace, the lower one at the wrist. A strong piece of rubber about two inches wide is attached to the upper band, and passing through loops on the intermediate bands is inserted into the band on the wrist in such a manner that when the forearm is flexed the rubber is lax, but when extended is put on the stretch. To overcome the spasm of the flexors of the carpus, a small band of calfskin is placed around the hand, just behind the knuckles, and secured on the palm by a clasp; to this carpal piece, on the dorsal surface, is attached at right angles a small strap of calfskin, which is continuous with a piece of rubber, which in turn is sewed to the leather band, just below the elbow, in such a manner that when the carpus is extended to its utmost the rubber is lax, but when flexed, even slightly, the rubber was drawn taut or stretched, thereby overcoming the spasm. The apparatus is made by Reynders & Co., of New York.—*Medical Record.*

The Early Diagnosis and Early Treatment of Acute Anterior Poliomyelitis. —DR. ARCHIBALD CHURCH considers this condition, aside from trauma, as the most prolific source of deformity and of physical incapacity from useless limbs. Acute poliomyelitis occurs most frequently during the latter half of the first year of life, and over three-fifths of all cases are encountered under 4 years of age. An hyperesthetic condition of the extremities is said to precede the outbreak of the affection. The onset of the disease is variable. Usually there is a febrile stage with a temperature of 101° to 102° F. In some instances the onset is abrupt, a complete paralysis of the limbs being found without any antecedent malaise. The essentials for an early diagnosis are a slight fever, local tenderness, flaccidity of the muscles and a failure to respond to a faradic current strong enough to cause contraction in the sound limbs. The tendon reflexes are abolished very early, but as they are difficult to obtain in infants, their investigation has not been insisted upon. *Treatment.*—The conditions for consideration in local treatment are these: The normal balance of the muscles passing a given articulation is disturbed by the weakening of flexors and extensors; either from gravity, or by the action of the impaired muscles, or both, the joints are disposed to be placed in and to maintain unusual positions; joint surfaces and ligaments in infancy quickly yield, and the malposition becomes mechanically fixed; a muscle that is allowed for a long time to retain a contracted state tends to become inextensile; a muscle in a stretched position always acts at a disadvantage, because, in that condition, its anatomical opponent is in the best mechanical position to act vigorously. The important deduction is to maintain normal positions and relations in the extremities affected, by proper mechanical support. The next important duty is to maintain nutrition of the paralyzed muscles until the trophic influence of the spinal cord is restored. This is to be accomplished by massage, friction and electricity. Only electricity of sufficient strength should be employed as will produce visible contractions of the affected muscles. All muscles which show, or are likely to show any tendency to permanent shortening, must be stretched. All joints should be passively put through their widest range of motion and massage must be confined to the palsied muscles. The careful and persistent use of strychnine is advocated; but its hypodermic employment is discountenanced as needless cruelty.—*Kansas Medical Journal.*

The Abuse of Milk in Albuminuria.—LECORCHÉ and TALAMON deprecate the exclusive use of milk as a sole aliment in all cases of albuminuria. It is certain that milk is of undoubted value in albuminuria, but, like drugs, it has its indications and contra-indications. One is no more justified in prescribing a milk diet for albuminuria than digitalis for every heart murmur. They have often noted the lamentable consequences of a milk diet. The abuse of a milk diet is founded on a supposititious physiological axiom that milk is a perfect food. Passing the infantile period, man was never destined to live exclusively on milk. One litre of milk contains on an average 37 to 40 grammes of albuminoid matter, 40 grammes of fat, and 50 grammes of hydrocarbons. The daily ration of an adult is fixed at 125 to 130 grammes of nitrogenous principles, 100 grammes of fat, and 300 grammes of hydrocarbons. If 3 litres of milk are necessary to yield the necessary nitrogenous principles and fat, this quantity of milk does not furnish the necessary quantity of hydrocarbons. In admitting that the larger quantity in proportion of nitrogenous matter and fat compensates for the deficiency of hydrocarbons, it would be necessary to administer 4 litres of milk a day to subserve the purpose of nutrition. Is the human stomach capable of absorbing indefinitely this quantity of milk without nausea and without fatigue? Certainly not. Digestive troubles follow, resulting in insufficient nutrition and general anemia. Subjects confined to an exclusively milk diet are pale, their flesh is flabby, they are incapable of cerebral activity, they tire easily and have lost all physical and moral energy. The chemical equilibrium may be satisfied, but the vital equilibrium is not. Even if milk is sufficient for alimentation of the bed-ridden patient, it must be condemned as an exclusive diet for patients who are able to be about. Six observations are cited, which demonstrate, in brief, that an exclusive milk diet, continued for a long time, is not only without effect in diminishing albuminuria, but leads to complications the issue of altered nutrition.—*Médecine Moderne.*

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M. D., Assistant Physician, State Asylum for Insane,
Stockton, Cal.

The Treatment of Alcoholic Delirium.—DR. E. LANCERREAUX considers this as belonging to the class of toxic deliriums, due to the specification of alcohol upon the cerebral tissues, the excitement being the cause of the insomnia and of the death which generally takes place from nervous exhaustion. The principal indication in the treatment of this delirium is therefore to produce sleep, and all means must be employed to bring this about. The patient must be isolated in a dark room, where nothing can excite the senses. If he be violent and liable to injure himself he should be placed in a padded room, but he should not wear a camisole, as this frequently gives rise to exhaustion. The remedies which have a special controlling influence upon the reflex excitability of the nervous system are bromides, opium, morphine, and chloral. The effect of the bromides is less energetic than that of the other remedies, and they are too slow in action in a case of acute delirium. Opium and morphine may be more advantageously employed, but if large doses are necessary to produce sleep, chloral is preferable, as it is more certain and rapid in its effect. The dose employed must, however, be sufficient to produce sleep, otherwise it rather excites than calms the patient. The dose advised by Dr. Lancerreaux under these conditions is 60 to 90 grains [!] of chloral in five ounces of sweetened infusion of limes, with an ounce and a half of syrup of morphine. If this does not produce sleep in ten minutes, 1/6 to 1/3 grain of morphine is injected hypodermically, and the physician remains with the patient until he sleeps. If it be necessary, a second dose of chloral is given. The delirium ceases within 24 to 48 hours, and in some cases the patient can resume his occupation.—*Bulletin Général Thérapeutique—American Journal of Medical Science.*

Acute Mania from Inhaling Carbon Bisulphide.—Three cases of this nature in which perfect recoveries resulted within from two to seventeen months, have been reported by DR. FREDERICK PETERSON. No hereditary taint was present in these cases, which were all young, healthy, and strong men, working in the same department of a rubber factory, where they were exposed to the fumes of a mixture of Cs_2 and S_2Cl_2, commonly used in the preparation of rubber goods. The patients had never before had an attack. In the first and third cases the condition was so maniacal that the subjective and somatic toxic symptoms could not be studied. In the second case symptoms characteristic of bisulphide of carbon poisoning were observed, such as headache, electric paresthesiæ throughout the body, sensation of numbness in the tongue and head, globus hystericus, voracious appetite, hilarious feeling of early intoxication, terrible dreams at night, and general muscular tremor. Neuritis was not observed in the three cases.—*Boston Medical and Surgical Journal.*

Ambulatory Automatism in a Dipsomaniac.—DR. SONQUES reports the case of a man, aged 33, affected with dipsomania since his 20th year. In May, 1890, when starting to his work after a 10 days' debauch, the man suddenly commenced to walk aimlessly from Paris in the direction of Vincennes. He passed the night in a wood and only emerged from his semi-conscious condition on reaching home the next evening. After he had become fully conscious he could to a great extent recall what he had done and where he had been. A few months later, after a spree lasting 15 days, he made another semi-automatic excursion. Under bromide treatment the propensity to drink disappeared.

Sonques points out that his patient was not an ordinary alcoholic, but was evidently a hereditary degenerate in whom the dipsomania might be considered a developmental neurosis.—*Arch. de Neur.*—*British Medical Journal.*

Changes in the Tendon Reflexes Among the Insane and Epileptics.—PROF. VON BECHTEREW has recently published an article on this subject, in which he summarized as follows: The knee-jerks in the insane may be unequal, diminished, or absent, but the alteration is not constant in any given form of insanity. In epilepsy it is in many cases increased and unequal on the two sides. During a fit it is abolished, and in some cases the tendon reflexes remain absent for a time after the fit. In other cases there is a temporary increase or change in character of the reflexes. The period of latency is on an average longer after a fit than before.—*Neurol. Centralblatt*—*International Medical Magazine.*

FORMULÆ.

By GEO. B. SOMERS, M. D., San Francisco, Cal.

Palmar Syphilide:

Calomel ---------------- ʒ i
Lanoline
Axunge ---------- ----āā ℥ ss

S.—Rub in each night at bedtime and put on gloves.—*Medical Press.*

Otalgia:

Menthol
Camphor ------------āā ℈ i
Liquid vaseline ---------- ℥ i

S.—Instil into the ear several times a day.—*Medical Press.*

Chancroid.—GAMEL uses:

Acidi carbolici ---------- ʒ ii
Camphoræ ------- ----- ʒ v

S.—Apply topically by means of absorbent cotton, twice daily.—*College and Clinical Record.*

Lumbago.—Instantaneous remedy:

Collodion
Tincturæ iodi
Liq. ammoniæ--āā *part. æqual.*

S.—Apply freely over the parts affected, with a camel's hair brush, and instantaneous relief will be afforded.

Local Treatment for "Colds."—When sneezing occurs, before inflammatory action has set in, use the following as a snuff or with insufflator:

Sodii salicyl. ------------ ℥ ss
Acid. boric pulv. --------- ℥ i
Cocaine hydrochlor. ----gr. xxii

Mix by agitation, not in a mortar.—*Brooklyn Medical Journal.*

Menthol in Prurigo.—COLUMBINI publishes several mixtures which he found useful in itching affections of the skin:

I. Menthol -------------gr. lxxx–clx
Alcohol ------------- ℥ iiiss

II. Oxide of zinc
Powdered starch---āā ʒ viss
Menthol --------------gr. viii–xlv
Vaseline -------------- ℥ ii

III. Oxide of zinc --------- ʒ iii
Subnitrate of bismuth-- ʒ iii
Menthol --------------gr. xv–xlv
Powdered starch ------- ℥ i

—*Therapeutic Gazette*

Counter-Irritant in Diseases of the Chest—(*Practitioner*):

Aceti cantharides ------- ʒ ii
Spiritum camphoræ *ad*-- ℥ i

S.—Apply to chest at bedtime, until redness is produced.—*Medical and Surgical Reporter.*

Cod-Liver Oil Emulsion.—The *Practitioner* gives the following simple formula:

Olei morrhuæ ----------m. xxx
Glycerini --------------m. x
Liquor. calcis-----------vel
Mucilaginis acaciæ ------ ʒ i—M

—*Boston Med. and Surg. Journal.*

Antinervin.—This, according to the *Drogisten Zeitung*, is a mixture composed as follows:

Acetaniliad ------------50 parts
Salicylic acid -----------25 parts
Ammonium bromide ----25 parts

—*National Druggist.*

Depilatory.—BUTTE uses:

Collodion	℥ i
Iodine	gr. xii
Alcohol	ʒ iiss
Spirits of turpentine	m xx
Castor oil	m xxx

S.—The parts to be epilated are painted for three or four days in succession, with thick enough coats. Then when the collodion is raised it carries with it the hair adherent to its inner surface.—*Nouveaux Remèdes.*

Internal Hemorrhoids.—The following is KOSOBUDKI'S modification of Unna's suppository:

Chrysarobin	gr. i
Iodoform	gr. $\frac{1}{4}$
Extract belladonna	gr. $\frac{1}{8}$
Cocoa butter	gr. xxx
Glycerine *q. s.* for consistency.	

S.—One suppository in the rectum each day.—*American Practitioner and News.*

Blenorrhagia.—M. WATIER recommends:

Corrosive sublimate	gr. i
Antipyrine	gr. 2
Distilled water	℥ xx

S.—Inject into the urethra four times a day. The antipyrine makes the injections comparatively painless.

For painful erections use the following in cachets:

Antipyrine	gr. xv
Sodium bromide	gr. xlv

—*Union Médicale.*

rep

p 680

Acute Rheumatism:

Acidi salicyl.	
Lanolin.	
Ol. terebinth. āā	ʒ iiss
Axunge	℥ iiss

S.—Apply freely to joints. Give no medicine internally.—*Times and Register.*

Nocturnal Loss of Urine.—WHITE gives:

Benzoate of soda.	
Salicylate of soda āā	gr. xv
Ext. of belladonna	gr. xxx
Cinnamon water	℥ iv

S.—Four or five teaspoonfuls to be taken during the day.—*Nouveaux Remèdes.*

Erysipelas of the Face.—PETRINI has obtained good results from the following treatment. He gives first:

(1) Calomel	gr. xv
Scamoni	gr. viii

Divide into two wafers, to be taken in the morning within half an hour of each other.

Locally he uses:

(2) Corrosive sublimate	gr. ii
Collodion	℥ ii

Paint the face twice a day for three or four days.

The patient is put on a milk diet, and on the second day two of the following pills are given every two hours:

(3) Sulphate of quinine	ʒss
Iodoform	gr. vii
Syr. of Tolu.	
Ext. of gentian āā *q. s.*	

Divide into 20 pills.—*Medical Press and Circular.*

Summer Catarrh.—*Correspondenz-blatt:*

Cocaine hydrochlorate	1 part
Powdered camphor	2 parts
Bismuth subnitrate	16 parts

—*New York Medical Journal.*

Otalgia:

Menthol.	
Camphor	āā gr. xx
Liq. albolene	℥ i

S.—Drop in the ear p. r. n.—*Boston Medical and Surgical Journal.*

Congestive Headache of Brain-Workers.—PUTNAM advises:

Cessation of work, cup of black coffee before rising; spinal douche 40° F. at ten or eleven o'clock, and

Tr. nucis vom.	℥ i
Elix. gent.	℥ ii
Acid phos. dil.	℥ i
Elix. pepsin.	ʒ ii

S.—Teaspoonful in water, three times a day.—*Journal American Medical Association.*

New Ointment for Eczema and Acne.—UNNA prescribes:

Zinc ointment.	
Lanoline.	
Chloride of calcium āā	ʒ iiss
Precipitated sulphur	gr. xlv

—*Union Médicale.*

Cocaine.—INGALS and RHODES have modified Witherstine's solution as follows:

Atropine sulphate-----gr. ½
Strophanthine --------gr. ⅕
Cocaine hydrochlorate-gr. xx
Acid carbolic----------gr. v
Distilled water *q. s. ad* ℥ i

S.—Local anesthetic.—*North American Practitioner.*

Urticaria.—BOURDEAUX has found the following prescription to give great relief in urticaria:

Liquor calcis-----
Aquæ laurocerasi- } āā *part. æqual*
Glycerine -------

S.—Apply externally and cover with cotton.—*Boston Medical and Surgical Journal.*

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for August.—The deaths registered in 104 town districts of the State during the month of August, in a population of 812,204, correspond to an annual rate of 13.63 a thousand; the total mortality having been 923. 108 deaths were due to zymotic diseases, giving an annual rate of 1.59 a thousand; of these, 6 were due to diphtheria, 37 to cholera infantum, 33 to typhoid fever, 16 to diarrhea and dysentery, 2 to cerebro-spinal fever, 3 to whooping cough, 5 to croup, 6 to remittent and intermittent fevers. 229 deaths resulted from diseases of the respiratory organs, giving an annual rate of 3.36 a thousand; of these, 147 were due to consumption, 58 to pneumonia, 16 to bronchitis, and 8 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.17 and 1.19, respectively. 67 deaths resulted from diseases of the heart, 5 from alcoholism, 7 from erysipelas, 27 from cancer, and 363 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 551,944, was 14.11. The highest rate for the month, occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco; the lowest from Stockton.

METEOROLOGY.

Summary for August.—*Temperature.*—The normal temperature of the State for August is 73.7°; the mean for August, 1893, was 74.5°; a departure from the normal of + 0.8°. The highest monthly mean was 103°, at Volcano Springs, in the desert regions of San Diego county, 223 feet below sea level; the lowest, 54.9° at Point Lobos. The maximum temperature was 122°, at Volcano Springs, on the 2d; the minimum, 35°, at Boca, 5,531 feet above sea level, on the 22d. The greatest monthly range was 66° at San Ardo. The least, 18° at Point Lobos.

Rainfall.—The normal precipitation for the State for August is 0.03 inches, the average for August was 0.01 inches, a departure from normal of - 0.02 inches. The greatest monthly precipitation was 0.75 inches, at Indis; the least, nothing, at numerous points throughout the State.

Wind.—The prevailing direction of wind was westerly.

Unusual Features.—The unusual meteorological feature of the month was the occurrence of the greatest rainfall in the State over the desert regions of Southern California; at Indio, San Diego county and Needles, San Bernardino county, there having been five days at the latter place where rain fell to an appreciable amount. Usually the heaviest precipitation occurs in Del Norte and the mountain counties.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for August, 1893.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn……Cal.	76.6	102.0	48.0	----	----	----	0	0.00	----	----	----	----	S.	Southern Pacific Company.
Berkeley……"	56.7	76.0	50.0	68.3	53.0	15.3	0	0.00	86.0	6	13	12	S.W.	Obs. University of California.
Colfax……"	81.6	99.0	58.0	----	----	----	0	0.00	----	----	----	----	W.	Southern Pacific Company.
Eureka……"	55.0	64.0	47.0	60.0	51.0	9.0	0	0.00	94.0	10	9	12	N.W.	Weather Bureau Dept. Agr.
Fresno……"	82.0	109.0	56.0	99.3	64.6	34.7	0	0.00	30.0	30	1	0	N.W.	" " "
Keeler……"	81.2	97.0	62.0	92.5	70.0	22.5	1	T.	30.0	17	9	5	S.W.	" " "
Los Angeles……"	71.4	92.0	54.0	83.1	59.8	23.3	0	0.00	77.0	10	21	0	W.	" " "
Monterey……"	61.1	72.0	50.0	----	----	----	0	0.00	----	----	----	----	S.	Southern Pacific Company.
Napa……"	65.9	87.0	49.0	77.5	54.3	23.2	0	0.00	72.0	16	15	0	S.W.	Station Napa Insane Asylum.
Oakland……"	61.3	82.0	49.0	70.0	52.6	17.4	0	0.00	94.0	18	9	4	W.	Chabot Observatory.
Paso Robles……"	72.8	107.0	54.0	----	----	----	0	0.00	----	----	----	----	S.	Southern Pacific Company.
Red Bluff……"	81.0	106.0	57.0	96.5	65.5	31.0	0	0.00	35.0	31	0	0	S.E.	Weather Bureau Dept. Agr.
Sacramento……"	74.1	102.0	54.0	90.3	57.9	32.4	0	0.00	58.0	31	0	0	S.	" " "
San Bernardino"	75.6	100.0	53.0	93.2	57.9	35.3	0	0.00	61.0	22	9	0	W.	A. K. Johnson, M. D
San Diego……"	70.0	81.0	59.0	75.8	64.1	11.7	0	0.00	78.0	28	2	1	W.	Weather Bureau Dept. Agr.
San Francisco……"	56.6	72.0	47.0	62.9	50.9	11.3	0	0.00	87.0	11	15	5	S.W.	" " "
Santa Barbara……"	66.1	84.0	55.0	73.7	58.5	15.2	0	0.00	79.0	24	5	2	W.	Hugh D. Vail.
Santa Cruz……"	63.1	85.0	45.0	74.8	51.4	23.4	0	0.00	----	28	0	3	S.W.	W. R. Springer.
Yuma……A. T.	91.0	111.0	67.0	104.1	78.0	26.1	3	0.38	54.0	22	8	1	S.W.	Weather Bureau Dept. Agr.

T. means a trace of rain.

Blank (----) indicates data missing.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: OCTOBER, 1893.

PURE WATER FOR SACRAMENTO.

Sacramento, more than any other city in California, has suffered from pestilence, fire and flood. In early days, her position on the largest navigable river of the State, and her proximity to the mining regions, placed her in the first rank of importance amongst the new cities that were rapidly springing into existence. In later years, when mining had ceased to be the chief industry of the State, the natural commercial advantages of the city, and the pluck and determination of her citizens, enabled her to maintain a successful struggle for survival, in the face of many adversities. Hampered by a debt, originally small, but which, under the grossest mismanagement, had been allowed to increase to oppressive proportions, and continnally menaced and retarded by the physical conditions imposed by her location, the city continued to prosper and to grow in importance.

In the course of time, levees were built, miles of streets were raised many feet above the original level of the town, and all over the city gravel and macadam replaced the bottomless mud of the river delta. Amidst all the improvements that recent years have seen accomplished, there still remained one glaring defect—the city's water supply. Primitive surface wells had long been replaced by water-works, pumping from the Sacramento river, and as the demands of the community increased, these works were enlarged, but the water was still taken from the river and sent direct into the pipes without even an apology for filtration.

The river water was originally pure, but the rapid increase of population along its banks, and the growing area of land brought under cultivation, exposed the city to the greatest dangers. During the rainy season, the river had always overflowed its banks for hundreds of miles. In an unsettled country, this only added to the gross impurities of the stream, but now each winter swept into the current the waste and offal of vast cultivated districts and of all the low-lying sections of towns along the banks. These evils had become so apparent that twenty years ago the medical profession of the city suggested the necessity of a better supply, and had afterwards constantly urged the need for a change. The Sacramento Society for Medical Improvement had repeatedly considered the question, and, after careful investigation, had committed itself to the opinion that, as the cost of mountain water rendered it prohibitive, well water obtained on the eastern border of the city could be substituted. Repeated examination had shown that this water was of excellent quality, and that the supply was apparently inexhaustible.

The financial condition of the city rendered it impossible for her to construct a new system of water-works and at the same time make other municipal improvements that were urgently needed. At this juncture, offers were made by corporations to furnish mountain or deep-well water, and a committee of citizens was appointed to prepare specifications, on which bids were made. The method of obtaining mountain water and the source of supply, were not deemed satisfactory, and the bid of the company proposing to furnish well water was finally adopted. Though the City Trustees had full power to enter into a contract with the company, they preferred to place the responsibility with the people, and the question was ordered submitted at a special election.

It was quite evident that the old-time prejudice against well water, derived from the experience with surface wells in cholera times, together with long habituation to a water that was ordinarily of fair quality, coupled with the natural distrust of a private corporation in this capacity, would inevitably defeat the proposition unless the most active measures were adopted. The Sacramento Society for Medical Improvement, at a meeting called to consider the question, unanimously indorsed the new supply. The City Board of Health took similar action. Physicians were unanimously in favor of a change, and citizens, whose association with strangers, or experience in travel, had keenly impressed them with the great commercial disadvantage of impure and muddy water, worked constantly for the improvement. It soon, however, became apparent that despite all these factors and the unanimous advocacy by the press (in one case rather weakened, if not rendered suspicious, by a radical change of front), the proposition would probably be defeated unless some special effort were made. At this juncture THE MEDICAL TIMES, realizing the vast importance of a pure water supply for Sacramento, and having for several years advocated the deep-well system as the only source that was available, decided to issue a special number in which the question could be considered from all points.

It was deemed best to deal with the question from every aspect, answering the objections that had been raised, and providing the citizens with a mass of testimony that would convince any one susceptible to reason and not blinded by prejudice. The number was accordingly prepared, an edition of five thousand printed, and on September 26, or three days before the election, was distributed gratuitously throughout the city. After an election, at which a good deal of feeling was exhibited, the proposition was carried by the handsome majority of 807 votes. That this victory for progress was largely due to our efforts has been generally admitted, and is ample compensation to all concerned for the labor involved. It is also a victory for modern medicine and for the profession, as showing the influence for good that the physician can exert in his community. At this date a contract has been signed with the water company, material for construction has been ordered, and the experimental wells are being sunk. It is quite probable that by next summer Sacramento will be enjoying an ample supply of pure water, that for quality will be unequalled by that of any city on the coast.

PAN-AMERICAN MEDICAL CONGRESS.

The meeting of the Pan-American Medical Congress recently held at Washington seems to have been a complete success. The attendance was larger than many had expected, 1,160 delegates having registered, and the delegation from abroad was thoroughly representative. Almost all the South American nations were represented by delegates, who heartily and earnestly participated in the work of the congress. The meeting was opened by the President of the United States, and after adjournment, the foreign delegates were escorted on a round of visits to the principal eastern cities, the excursion terminating at Chicago and the Fair. The scientific work was good and fully up to the standard of such bodies. This organization, which as an experiment has proved so successful, may now be regarded as permanent, and the next meeting will be held in Mexico in 1896 or '97, according to the date of the International Medical Congress, which will be decided at Rome next April. Perhaps the most important practical result of these meetings will be the determination of some comprehensive system of quarantine, isolation, and the management of those epidemic diseases that frequently threaten the western hemisphere. The nations represented at Washington have a common interest in speedily arriving at a solution of this problem, and we believe that in the near future a uniform system will be adopted that will be productive of the best sanitary results.

NOTES.

Dr. G. C. Simmons, of Sacramento, is at present visiting the World's Fair. After a short stay in some of the Eastern cities, the doctor will sail for Europe, where he will remain for several months.

The Late M. Wm. Vignal.

We have much regret in announcing the death of M. Wm. Vignal, who has, for several years, been the Paris correspondent of The Medical Times. Some months ago our correspondent mentioned that he was recovering from an attack of sickness and was still far from well. At the same time the statement was made in a contemporary that he was suffering from pulmonary tuberculosis, which it was feared had been contracted in the process of his laboratory researches on zoögleic tuberculosis. This unfortunately proved too true, and the malady, which had run a rapid course, terminated fatally on August 14. M. Vignal was for many years attached to the laboratory of the College de France, and was already well known for his scientific ability and his original researches. In his death we feel that this journal has sustained a distinct loss.

California Northern District Medical Society.

The third annual meeting of the California Northern District Medical Society will be held in Pythian Hall, Sacramento, October 10. The Society will remain in session one day, the morning and afternoon being devoted to scientific work, and the evening to a banquet tendered by the Sacramento Society for Medical Improvement. A circular letter of invitation and a preliminary announcement of the meeting have been sent to every physician in Northern and Central California, and the meeting promises to be the largest in the history of the Society. The following are the titles of the papers, with the names of the authors: "Feeding and Weaning of Infants," J. R. Todd, Gridley; "Report on a Monstrosity," Elmer E. Stone, Marysville; "Surgical Treatment of Appendicitis," T. W. Huntington, Sacramento; "Muscular Rheumatism," T. P. Perry, Yuba City; "Peritonitis," S. J. S. Rogers, Marysville; "A Plea for Greater Promptness and Thoroughness in the Treatment of Diseases of the Ear," W. E. Briggs, Sacramento; "Cholera Infantum," G. W. Stratton, Marysville; "Report of a Case of Invagination of the Bowels and Exhibition of the Specimen Removed at the Autopsy," T. B. Reardan, Oroville, and A. G. Smith, Palermo; "Curettes and Curettage," W. A. Briggs, Sacramento, "A Safety Pin in the Intestinal Canal of an Infant for Six Months without Causing Symptoms," J. H. Parkinson, Sacramento. During the sessions, Dr. S. M. Mouser, of San Francisco, will give an exhibition of microörganisms showing, under the microscope, the various germs that have been isolated, and demonstrating the method of their propagation by cultures. Dr. A. W.

Hoisholt, of Stockton, will give a demonstration on the present status of cerebral localization. Physicians who are desirous of joining the Society and who are unable to attend, can forward their applications, accompanied by $4.00, to the Chairman of the Board of Censors, Wm. Ellery Briggs, Sacramento.

AMERICAN MEDICAL ASSOCIATION.

Membership in the American Medical Association.—"This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues and subscription for the *Journal.* Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership. On receipt of the above amount the weekly *Journal* of the Association will be forwarded regularly."

The Pacific Medical Record, of Portland, Oregon, says: The next meeting of the American Medical Association will be held in San Francisco, at which a large number of the doctors of this region should be in attendance.

Postponement of the Meeting.—We understand that, owing to the very general expression from college men and clinical teachers, the meeting of the Association will be held on the third, instead of the first Tuesday in May. The matter has been left in the hands of the business committee of the Association, and, as there is no opposition to the movement, it will probably be so ordered. The change is exceedingly desirable, as far as California is concerned. The State will then be looking its very best, the verdure of spring being still with us, untouched by the long, dry summer that is to come. In case of the occurrence of a late season, it will insure the opening of Yosemite, Tahoe, and other matchless attractions in the high Sierras. It also permits of a somewhat longer interval between the meeting of our State Society, during which the profession can recuperate for fresh exertions. The change will be still more propitious for the States and Territories to the north, and visitors who propose to come or to return by the northern trans-continental lines will be pleased at the change.

Our Eastern Visitors.—DR. R. H. PLUMMER, the Chairman of the Committee of Arrangements, who has been attending the Pan-American Medical Congress, says that he has everywhere encountered the most gratifying assurances of a large attendance from the Eastern States. On every hand he met with the most cordial expressions of coöperation and good wishes for the success of the meeting. At the opening of one of the general sessions of the congress, Dr. Plummer was accorded the privilege of addressing the members and urging the attractions that the Pacific coast offered to its prospective visitors. DR. H. M. SHERMAN, who has just returned from St. Louis, where the Association of Orthopedic Surgeons held its meeting, reports that there were many inquiries as to California, and from the expressions heard everywhere it is evident that the attendance from "trans-Missouri points" is likely to exceed our expectations. It is quite evident that the "California fever," which has always been highly infectious, promises in the near future to assume epidemic proportions that nothing but the bracing atmosphere of San Francisco can relieve.

The Southern California Practitioner, whose editor, DR. H. BERT ELLIS, is the Assistant Secretary of the American Medical Association, in speaking of the coming meeting says: "The National Medical Association has voted to hold its next meeting in San Francisco. Of course we are highly pleased with the result, the Association has come as near Los Angeles as we could reasonably expect this time. The advantages of this choice are numerous. In the first place, hundreds of the leading physicians will visit California, and many of them will come to the southern part of the State; their object will be to see the country, but incidentally they will learn that this is the best summer resort in

America It will be a good thing to be sized up by the doctors; we shall give them a hearty welcome; they in turn will treat us well and send us a new "one-lung" brigade. Every one knows how the California building at the World's Fair is crowded with eager, yet half doubting inquirers; now, here is a chance to verify the claims made at the exhibition; let each community send a reliable doctor to spy out the land before the hosts of immigrants invade us. Another attraction for the Pacific coast physician will be the Midwinter Fair, which will probably continue until July. In another and more favorable way this meeting will benefit the profession of California; new interest and added enthusiasm will be gained in professional work, increased knowledge and added proficiency of all participants will be great inducements for a large attendance of the physicians of our State."

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, August 15, 1893.

The President, F. L. ATKINSON, M. D., in the Chair.

Appendicitis with Perforation of Colon—Operation—Recovery.—DR. W. J. HANNA reported the case of a child, six years of age, in whom a diagnosis of appendicitis had been made. On opening the abdomen a small perforating ulcer of the colon was found, together with numerous adhesions, the breaking down of which revealed an abscess cavity. The appendix was found, ligated and removed, together with a small piece of omentum, to which it was adherent. The opening in the colon was close by the Lembert suture, and the adhesions separated. The abdomen was flushed with boiled water. The child's bowels moved freely after the operation, and the sutures were removed on the fourth day, the temperature being normal.

DR. T. W. HUNTINGTON said this was a case where special attention should be called to the symptoms which were not apparently grave before the operation, but he had never seen a case where the circumstances were more unfavorable. The operation was performed during the subacute stage of the attack. The surgeon should be more ready to interfere than in the past, as the histories of these cases emphasizes this conclusion.

The Water Supply of Cities.—DR. H. H. LOOK read a paper upon this subject. He said: The necessity of our larger cities having an ample and constant supply of water, has frequently led them to seek for quantity rather than quality, supposing that all waters, unless presenting some physical objection, were wholesome. Surface waters have been in the past, and will still continue to be, the main source of water supply for mankind. These are produced by the rains falling upon the earth and running off rapidly into rivers and lakes, or percolating through the soil into springs and wells. Rain-water can be taken as a standard of purity for natural waters. In its passage over the surface of the earth, it gathers those impurities which break it up into so many varieties, each partaking of the character of the soil of its water-shed. Hence the many classifications, according to the leading mineral constituent into saline, chalybeate, sulphurous, calcareous, magnesian, etc.; also according to their abstergent qualities, into hard and soft waters. Hard waters contain in solution lime carbonate and are found in the regions where that substance exists. Soft waters may contain other mineral matter so long as the lime is absent. Since all these chemical constituents are harmless to the system, it is perhaps best, for sanitary purposes, to classify waters according to their physical distribution into lake, river, spring, and well water. From these sources it is necessary for us to obtain our water supply. River water is generally that chosen for large cities, as it meets all the demands hitherto imposed upon it. The supply was never-failing, and the water coming in contact so little with the soil was free from earthy salts and was also soft in character. But another form of contamination occurs, which is far more serious, and that is sewage. From this is derived almost all the disease-producing impurities that enter water. Water contaminated with sewage is at all times unwholesome. To destroy these disease germs has been found impossible except by heat. Filtration may remove a large percentage of them, but has not proven perfectly successful.

Well water, when derived from shallow wells, is also unsafe. Sipage from cess pools and privies contaminates it. Deep well water is perhaps the safest source of water supply, when it can be had in sufficient quantity. True, it contains many of the earthy salts, but as these are harmless, they can be objected to only when they render the water unpalatable. The distance the water must percolate through the earth removes all the impurities held in suspension, as clay and sand, and also offers the best means of removing and destroying the germs. A city supplied with water free from sewage contamination, need not fear an epidemic of typhoid fever or of cholera.

DR. J. R. LAINE, in opening the discussion, said: The water question is a very wide subject, and the obtaining of a satisfactory supply for a large town is a very important matter. There are but four sources of water supply for towns. These are rivers, lakes, wells and catchment water. If uncontaminated by sewers or effluents from manufactories, water from rivers may be free from objection. Large cities situated on the borders of large lakes sometimes obtain water of good quality by putting their supply pipes out far into the lake. Chicago and Milwaukee, on Lake Michigan, are well known instances, and other cities on the lower lakes do the same. Catchment water is never satisfactory, and should not be used until it has undergone an artificial filtration. Water may be obtained for public uses from both shallow and deep wells. Some superficial wells furnish an almost unlimited quantity, but their shallowness makes them very likely to become polluted, when much sickness may result from the use of the water. Wells sunk by boring through the surface measures, until they pass through fifty or sixty feet of hard clay, seems to be the best and safest source, provided the quality is suitable for domestic and other uses. This source is seemingly, if not actually, free from danger of surface contamination, on account of the imperviousness of the thick bed of clay or hard-pan which overlies the gravel and sand that holds the water. A number of cities in Nebraska and Kansas, some having double the population of Sacramento, obtain their water supply in this way, and I am informed do not suffer at all from typhoid fever or dysentery, or any of the maladies due to unwholesome or contaminated water. Deep water underlies the great plains, from the Missouri river to the Rocky mountains, a distance of 600 miles, at a depth of about 100 feet, though water from surface wells may be obtained nearly all over that vast region at from fifteen to thirty feet. The Sacramento and San Joaquin valleys have water and clay measures resembling very much those of the great plains. East of Sacramento city, wells bored to a depth of 110 feet reach water which rises to within ten or fifteen feet of the surface, and which can be diminished but a few feet by constant pumping of a steam pump. This water is clear and wholesome, and in every way more desirable than the river water in use. We may in time build aqueducts rivaling those of ancient Rome to bring water from the mountain lakes, but until that can be done we must look for a supply nearer home. I need scarcely add that I am strongly in favor of water from the deep wells east of the city, for I believe there is an unlimited quantity of better water to be obtained there than is supplied to any city in California.

DR. C. E. FOWLER: It should be to us a source of congratulation that to the medical profession almost solely is due the dissemination of knowledge in hygienic matters. This is more especially manifested at present by a general desire, on the part of the people, for a purer source of water for domestic purposes. Up to the time of the discovery that diseases of many kinds were transmitted from one individual to another, through the medium of germs of a specific character, the general idea as to the fatality of water was, that clearness was, as a rule, synonymous with wholesomeness, and that the filtering of water through soil, or by means of running streams, removed all deleterious substances. The development of the germ theory, however, demonstrated the fact that all surface water may become badly impregnated with disease germs, and scientific investigation has shown that it is through impure water that many of the most virulent diseases are disseminated. In cities of the size of Sacramento, the entire practicability of a water supply, from subterranean channels, has been demonstrated in other localities, similarly situated, and the increase in healthfulness which has invariably ensued, upon the use of such supplies, is one of the strongest arguments that can be advanced in its favor. In cities of vast population, as London, Berlin, New York, etc., the feasibility of water supply from such sources may be a matter of doubt, but where numbers in population and proper geological formation will admit of the use of water from underground channels, every effort should be made to utilize such advantages.

Dr. Thos. Ross: This subject ought to interest every citizen, as it means the prevention of disease. We do not have to depend upon surface water for our supply. In the geological formation of the Sacramento valley, so far as has yet been ascertained, we find first on the surface a deep layer of rich alluvial soil, then a stratum of gravel, in which is found water that is polluted by drainage from cesspools, vaults, and other surface filth, and the use of which for domestic purposes has been and is a pregnant source of disease. Beneath this first bed of gravel is a stratum of clay which is impervious to water. Beneath this layer of clay is a second bed of gravel, and in this is found clear, pure and wholesome water in abundance. The benefits from the use of water from the second stratum of gravel have been demonstrated in Woodland, whose source of supply comes from it at a depth of about 200 feet. Previous to the use of deep subterranean water the town was subject to epidemics of typhoid fever caused by the use of surface water—water taken from the first layer of gravel—and now since the use of surface water has been abandoned, and that from deep wells substituted, Woodland rarely has a case of typhoid fever that is not imported from neighboring towns. An examination or analysis of the Woodland water made by State Analyst Rising, proved it to be good for domestic purposes, and wholesome. I am convinced that Sacramento has, in the second layer of gravel, a similar supply of pure, clear, healthful water in inexhaustible quantity. I do not believe the water from Clear Lake, Lake county, to be good for domestic purposes, because of its being a basin catching the waters of thousands of mineral springs—the overflow only escaping from the lake, and evaporation being great in summer months renders the water from year to year more impregnated with mineral substances. By the use of properly constructed wells the water underlying the stratum of impervious clay cannot become contaminated with surface water. In this locality subterranean water is more healthful than river water, because the Sacramento river is the natural sewer of the great Sacramento valley. Water furnished in quantities insufficient for cleanliness, or of a quality unfit for drinking, is acknowledged to be the great source of such diseases as typhoid fever, cholera, dysentery—filth diseases which are preventible by proper sanitary regulations.

Dr. G. L. Simmons remembered that this important subject had been several times fully discussed before the Society during the 25 years of its existence. In truth, the very earliest efforts to call public attention to the excellent nature of the artesian supply near the city, were made by its members. As Chairman of one of the water committees, he had fully examined the subject as a citizen and as a physician, and there was no doubt in his mind of the desirability of giving up our river water for domestic use. Like all rivers, the American and Sacramento do receive the foulest offal of the communities above us. Simply diluted it enters our mains and is again distributed through the digestive tracts of our inhabitants. In addition to this pollution, we have at this season of the year, from the drainage of the great tule basins on the north, solutions of putrefying fresh water plants, which we all know increase the albuminoid ammonia and cause our present water supply to assume a dangerous receptivity for disease germs.

Dr. W. A. Briggs: Our first cases of typhoid fever occur after the early fall rains. My observation is that the earlier the rains the earlier the development of the typhoid epidemic. Two or three epidemics, our most severe ones in the past fifteen years, I remember followed early rains—one as early as September. Is this a mere coincidence? I cannot believe so. The first rains wash into rivers and their mountain tributaries the accumulated excreta of the previous season. These excreta are, no doubt, often infected with the germs of typhoid fever—the so-called mountain fever and the equally miscalled typho-malarial fever. The Sacramento and its tributaries receive the superficial wash of an immense area inhabited by a large population. The town of Oroville, and other mountain towns, and numerous mining and lumber camps, and still more numerous isolated dwellings, with little or no provision for the care of sewage, permit their excretions to accumulate for six months of the year and then precipitate them on us with the early rains. This, in my opinion, is the explanation of what has hitherto seemed a mere coincidence. We have not escaped the inevitable penalty of the violation of sanitary laws. We have had thousands of cases of typhoid fever in consequence of it—since last November not fewer than four or five hundred. Similar epidemics have been observed on the Ohio river, and microscopical examination has demonstrated the presence of typhoid bacilli in the river water. We are similarly situated, and have been similarly affected, and I believe from the same cause—infection of our drinking water. Unfortunately, we have no geological survey of the Sacramento and San Joaquin valleys, and we are, therefore, obliged to rely for our knowledge of the geological formation largely on the scattered, imperfect and unrecorded data of well-borers, but from its probable geological history, and from the best information obtainable from these imperfect sources, I believe that the strata of impervious clay, whose existence is demonstrated by every boring, are continuous, not broken, and that they impose an impassable barrier to the contamination of a deeper water supply.

DR. J. H. PARKINSON said that some years ago he had investigated the sources and the extent of the pollution of the Sacramento and of the American rivers. It was difficult, for obvious reasons, to procure the necessary data, but after some work a good deal of material was accumulated. A review of this showed the condition of things to be so bad that, as there was no prospect of immediate relief, he had deemed it unwise to publish the facts. It was undoubtedly true, as Dr. Briggs had stated, that the greatest prevalence of typhoid fever occurred after the early fall rains had swept the various impurities into the streams. In his experience, the severest epidemic had been in 1883, and this had followed an unusually heavy rainfall in October, with a subsequent dry period. The water supply of the city at present was bad, and in the nature of things must necessarily become worse with each succeeding year. The theory that running water purifies itself by distance was not a safe one to depend on. The foreign matters that reached the stream were in part consumed by the different forms of animal life, which had probably more to do with the purification than motion or sunlight. In relation to pathogenic germs, particularly those of the two water-borne diseases, cholera and enteric fever, it was quite certain that they could travel a long way in water and ultimately be found in that which was apparently of fair quality. To filter the present river water, as had been suggested, and at the same time to provide a supply adequate to the growing needs of the city, would be an exceedingly expensive undertaking, except by resort to chemicals, which was inadvisable. The filter beds would need to be quite extensive and they demanded constant attention and periodic cleansing. In the gravel beds east of the city, we had a natural filter bed of vast extent, such as it would be utterly impossible for any city to duplicate. Many cities were using subterranean water. London was in part supplied from that source, and in this country, Memphis, and, he believed, Brooklyn, were amongst the larger cities using well water. All river water was exposed to contamination, and the smaller the river the greater the danger from excessive concentration. The reason we had suffered so little in the past was that, owing to the great dilution, the dose of the poison had been exceedingly small. He could, perhaps, best express his opinion of the present water by stating that in his household the drinking water was first boiled and then filtered.

DR. WM. ELLERY BRIGGS: It is a great pleasure to me to find this unanimity of sentiment in regard to the water question. When I came here fourteen years ago, the appearance of the water struck me very unfavorably, and it was with great reluctance that I got into it to take a bath. At that time, however, every one would tell me that it was the best water in the world—apparently believing what they said. Soon after I found that many of the towns above us dumped their filth into the river and I questioned the statement that a solution of slickens, sewage, and dead animals of various kinds, could make a good and wholesome drinking water. A number of years have now passed since the members of this Society began to agitate the question of improving our water supply, and the unanimous opinion of the medical profession in this city is now in favor of subterranean water. It seems to me that the fact that the medical men of this city, who know so well the unwholesomeness of the river water, are all in favor of the proposed water supply, ought to have great weight with the general public. From other than hygienic points of view, a clear, pure water supply would be a great aid to the progress of Sacramento. The river water at the present time not only looks bad, but at times its odor is absolutely offensive, and any one must become very hardened who really likes such a beverage. We must, each one of us, work energetically and convince our friends of the lasting and great benefit an improved water supply will be to the health and to the prosperity of the city.

Dr. F. B. Sutliff: The theory that water purifies itself by flowing is not correct, though it was for a long time believed to be so. It is an easy theory to believe, as the evidence of one's eyes and nose helps out the delusion. Water grossly contaminated at a given point increases in clearness at every rod until, a few miles from the source of pollution, it may rival in brilliancy and taste the purest stream that is filtered through the hills. But we have to take into account the fact that a large amount of the contaminating matter has precipitated, and at the bed of the stream is slowly undergoing decay. That the larger particles have broken up into smaller and still smaller ones, or entered into solution; that the stream, gathering volume as it flows, granting that its tributaries are clear, becomes more dilute until its impurities are out of sight. If this dilution is great enough, water polluted with ordinary dead matter may become tolerably pure, but if the polluting element contains disease germs it can never become safe for domestic purposes. The bacteria of diseases, such as typhoid fever, belong to the vegetable kingdom, and need not be taken into the stomach in great numbers in order to reproduce their kind—to cause typhoid fever—any more than it is necessary to plant more than one grain of wheat in order to have wheat grow and bring forth wheat. I am fully aware of the fact that our book-shelves are full of books teaching that water will purify itself by flow, but they are not the books of to-day. I wish that the people who are inclined to believe and teach this false creed would look a little more closely into the subject. The destruction of all organic material is by oxidation—burning, not destroying by mere solution. Disease germs are not nearly so quickly oxidized, or burned, in the water as in the sunlight and the air. Let me quote, briefly, from a very good authority in support of this view: "The English River Pollution Commission paid much attention to the claim that water becomes purified by its flow, and the result of many experimental investigations constrained its members to report that there was no river long enough in the United Kingdom to secure the oxidation and destruction of *any* sewage which might be discharged into it—*even at its source*."

Dr. G. A. White: Our river water in the past has given rise to much and unfavorable comment. The water in use at the County Hospital for several years is the same as that which it is proposed to furnish the city. Many years ago Dr. Thomas M. Logan, who was then Secretary of the State Board of Health, sent samples of this water to San Francisco for analysis, and it was shown to be wholesome water. Later samples were procured from the same locality by Dr. W. A. Briggs and were reported on favorably. The supply is reached at the depth of 110 feet. The surface water in that belt was reached at fifteen or twenty feet, and there was a second water-bearing stratum at forty to sixty feet. It was, however, necessary to go to the greater depth to obtain the best water.

Dr. Look, in replying, said: If this subterranean water can be secured without contamination from the surface it will be pure. Its watersheds are the mountains where sewage contamination is impossible, and the geological formation in the valley prevents a subsequent infection. River water is soft, for the reason it flows rapidly from the ground on which it falls, and therefore dissolving very little of the inorganic salts, and particularly lime carbonate, which determines its character. Subterranean water is better than river water, for it is free from the organic substances that are washed into the rivers, rendering it unwholesome. The earth acts as a great filter, removing the suspended matter first, and in time destroying the vital organisms. While in the Pacific Mail Steamship service I had this fact demonstrated. In Panama we procured our drinking water from a small island, situated some twenty miles out in the gulf. For purity I have never seen it excelled. In Acapulco we also filled our tanks. On leaving Panama, until reaching Acapulco, no fever would occur, except a few cases that could be traced to a previous infection. These cases would all be among the local passengers that had remained in that city for some length of time. Our New York passengers would always escape. After leaving Acapulco we always had fever among our New York list until we reached San Francisco. I could see no other reason for this than in the water supply. Both waters were from springs, both clear, and one almost absolutely pure. Both were derived in a region teeming with malaria; but I could only assign this reason, that the Panama supply came from watersheds hundreds of miles away, while that of Acapulco came from the hills that surrounded it. One removed or destroyed the germs and the other permitted many to escape. While living in Kansas typhoid fever was very prevalent in those places where the wells were shallow, but on the upland, where, in order to get water, it was necessary to go deep into a sandstone stratum, that disease rarely occurred. I am heartily in favor of the subterranean supply for this city, for I am convinced that it is the purest and most wholesome that can be gotten, not excepting the mountain lakes.

The following resolution was then unanimously adopted by the Society :

WHEREAS, The undersigned, members of the Sacramento Society for Medical Improvement, having fully discussed the feature of a new water supply for the city; and whereas, such a supply is urgently needed for hygienic and for commercial reasons; therefore, be it *Resolved*, That the Sacramento Society for Medical Improvement unanimously endorse the proposition to supply this city with water from the gravel beds east of the city, believing this supply to be pure in quality and inexhaustible in quantity. *Resolved*, That a copy of this resolution be presented to the City Trustees, and the papers of Sacramento.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, September 12, 1893.

The President, H. H. HART, M. D., in the Chair.

New Members.—W. F. SOUTHARD, M. D., A. LILIENCRANTZ, M. D., C. E. PETRIE, M. D., and S. R. MATHER, M. D., were duly elected members of the Society.

The Modern Eye with an Examination of 1,300 Cases.—DR. W. F. SOUTHARD read a paper on this subject. The speaker having defined the various terms indicating errors of vision, said there was no power in the eye to correct myopia, and this must be accomplished artificially. In certain cases of hyperopia, and in myopia and emmetropia, when observing objects within a distance of twenty feet, the ciliary muscle performs important functions. The powers of accommodation are greatly strained by the modern student and much less so by the farmer, sailor, and laborer. The hyperopic eye is nature's eye. The race of the nineteenth century suffers greatly from myopia. Asthenopia usually follows from too close work, and is sure to occur if errors of refraction are present. Different degrees of refraction in the two eyes cause serious disturbances. Overtaxing the ciliary and recti muscles causes destruction in the functions of eyes. Most patients between 10 and 25 years of age show errors of refraction and a resulting nervousness, fretfulness, and irritability. The economic as well as the clinical management of these cases is very important. Mental and physical waste should be avoided in the individual, because individuals make up the sum of society. Everyone in any responsible position should have his eyes examined. Hyperopic astigmatism and weak external recti would cause the carpenter to strike his finger almost every time he tried to drive a nail. Pilots and engineers with color blindness caused, perhaps, the greatest sacrifice of property and life. The employer of labor is often at fault in failing to have the eyes of the workers properly cared for. Some employers would probably regard a man who wore glasses as having imperfect vision, when as a fact he has, by the aid of glasses, a perfect eye. Eye strain or muscular asthenopia often causes nervous prostration. The general practitioner should have some general idea about differentiating the most common eye disturbances. Whooping cough, measles and other infectious diseases often cause refractive errors. Eight hundred out of the 1,300 examined, had normal vision through powers of accommodation.

DR. A. BARKAN referred to the need of some knowledge amongst teachers in regard to optics as applied to eye work in pupils. Amongst these as well as in the requirements of medical colleges, there had been much advance in the last ten years.

DR. C. G. KUHLMANN said the nomenclature of ophthalmology was so abundant as to prevent the general practitioner from becoming as versed in eye diseases as he should.

DR. J. R. MCMURDO said teachers are very ignorant of the weaknesses of children through defects of the eye. He believed that provision should be made for the systematic examination and care of the eyes of pupils in the public schools.

DR. C. G. LEVISON said he was sure that education was an etiological factor in causing errors of refraction.

DR. SOUTHARD, in replying, said all children are born hyperopic. He emphasized the need for more consideration by teachers of imperfections in the eyes of children, and the resulting mental or physical failure.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, August 19, 1893.

The President, LUKE ROBINSON, M. D., in the Chair.

Fractures of the Coccyx.—DR. H. M. SHERMAN exhibited two specimens. He said: Four months ago I removed the coccyx from a girl æt. 22, who had been injured twice by falls; the first was caused by the horse she was riding rearing up and falling back on her. The second fall, two months later, was from a hammock. After the second fall, the coccyx seemed to be badly irritated, the patient was unable to sit, and had much pain. Before removal, no displacement or fracture could be detected. On removal, a subluxation was found between the first and second segments. After removal, all symptoms disappeared, but for a few weeks afterward, cramps in the limbs were present occasionally. I could not account for them, as I did not injure any important nerves in the operation. In the second case, a woman æt. 36, had, some years ago, fallen on her coccyx, by slipping and sliding down a flight of stairs. There was no apparent injury at first; afterward her symptoms were such that she was treated for uterine disease. She fell again, on July 4th of this year, and struck on the coccyx, and was at once in great and continual pain. On examination, the curve of the coccyx seemed to be reversed through its whole extent, and at the junction of the first and second segments there was tenderness and thickening. The bones were removed, and in disarticulating the coccyx from the sacrum it was seen that the last segment of the latter bone was detatched, and it was removed with the coccyx. The case was one of old injury to the coccyx, which had reversed its curve and put its apex into a position where it was especially exposed to the force of blows, and, in the one on the 4th of July, a particularly heavy blow, the last segment of the sacrum had been detached. Fractures of the sacrum are rare; those of the body of the bone, longitudinal and oblique, are associated with fractures of the other pelvic bones; transverse fractures of the lower portion of the sacrum, such as this was, are due to direct violence to the bone itself; or, as in the present case, probably, to force transmitted through the coccyx. The displacement of the lower fragment may be partial or complete, and is, as would be expected, forward. Diagnosis is made by external and rectal examination and the discovery of the false point of motion or deformity and crepitus. In this case there was no displacement, and the examination, showing the abnormal condition of the coccyx and its tenderness, led to the belief that it was the sole seat of the injury. The operation revealed the sacral fracture. Agnew states that transverse fractures of the sacrum are usually accompanied by paralysis of the bladder and rectum, from which there is complete recovery in a short time. Paralysis was not observed in this case. The fractured bone unites as do other fractured bones, and in this instance would have done so, but as the operation had made it a compound fracture, and as its healing would have been a slower process than the healing of the wound, it seemed best to remove the fragment

Pathogen-Pyogen.—DR. SHERMAN then read a short paper, entitled "Pathogen-Pyogen." He said: I have been struck at the clumsy forms of expression now in vogue to designate some of the classes of the causes of disease. The term "trauma" is excellent in its place, and we, in speaking and writing, but can appreciate the terseness and aptness of "traumatism" and "traumatic." The term "neoplasm" and its plural are equally felicitous. But at the present day we are thinking more, perhaps, of that class of diseases known to be due to microörganisms, and it is in this class that we lack apt and terse terms. We call these organisms pathogenic organisms, morbific agents, disease germs, etc., etc., but lack a single word term to define them. The same is true of the subclass of microörganisms, whose special action is in the production of pus. "Suppurative organisms," a term we have all heard, is bad and inaccurate. "Pus-producing organisms" is clumsy, "pyogenic organism," or cocci, or germs, are all objectionable because of the lack of terseness. Now, for the first class, I suggest the word pathogen, and that it shall mean any agent, mechanical, chemical, or vital, that produces a pathological condition. For the subclass, I suggest the word pyogen, and that it shall mean any agent, mechanical, chemical, or vital, which produces pus. The etymology of these words is plain, being the same as that of the adjectives, pathogenic and pyogenic. Their legitimacy I have had passed on by Professor A. T. Murray, Professor of Greek in the Leland Stanford Junior University, the following being his letter in reply to my inquiry:

MY DEAR DR. SHERMAN: The nouns you suggest are perfectly legitimate formations, against which no valid objection can be advanced. The termination "gen" is used with great freedom both in its active and its passive sense, and to denote not only single elements, but classes. Thus, pathogen, *e.g.*, is like oxygen in showing the active force of the termination, and like exogen or endrogen in denoting a class. Philologically speaking, it is correct to speak of an oxygen, *i.e.*, any element or substance which produces an acid, but, of course, the name was first given to a single element and usage has not extended it. On the other hand, we can say an endrogen because that name was given to a class.

Yours very truly, AUGUSTUS T. MURRAY.

DR. STILLMAN, in opening the discussion, said: I object to the change suggested, as there are so few pathogens which are not also pyogens; take for instance pneumococcus, which is both a pathogen and a pyogen. I believe that any nomenclature to simplify medical terms is commendable. Regarding fractures of the coccyx, I saw a case about seven months ago that was peculiar. The patient, a male, by occupation a carpenter, was wheeling bricks along a plank on the third story of an unfinished building, the floors of which were not laid, when the barrow slipped off the plank, the man losing his balance, fell to the floor below, straddling one of the joists. On examination a fracture of the sacrum one-half inch above the coccyx was found. There was complete paralysis of the rectum, bladder, and lower limbs. No treatment, but rest was given, and to-day he is as well as ever, excepting that his right foot is a drop foot, no power of flexion existing. The fracture is completely healed.

DR. DUDLEY TAIT: I might state that these two terms have been in use in France for several years as adjectives; just lately they have begun to use the terms pyo- and pathogenic organisms. I believe the Germans prefer the compound word. In France, in the hospitals, we used to call tubercular patients "bacillaries," and always put that diagnosis on their cards. About a year ago a case came under my observation that is not often mentioned in the text-books. A fracture of the crest of the ilium, about one-half inch in width and about three and a half inches in length, occurring in an old lady. The fragment could be grasped and crepitus easily made out. There was no displacement. The patient being kept quiet, the fracture united readily.

DR. D. W. MONTGOMERY: Any combination could be made from the termination "gen;" as for instance, a dysogen would be a pain-producer. There is a final "e" in the French words. There is nothing in the English language to designate a man who suffers with a disease of the prostate; in France and Germany he is called a "prostatic." In the same way we have nothing to correspond to "rachitic" or "Brighty."

DR. SHERMAN: A pyogen is necessarily a pathogen; but there are pathogens that are not pyogens. We can drop the compound nouns, using pathogen for pathogenic-organism. Some live in the body and produce a pathological condition and are pathogens. The staphylococcus aureus is a pyogen and also a pathogen. In every hospital there is a set of names applied by the staff to the different patients, as he is a "cardiac," etc. Regarding the case mentioned by Dr. Stillman, the paralysis might be due to hemorrhage. Both of my cases had, for two or three days following the operation, cramps in the calf of the leg. In operating, no nerves were disturbed, so the cramps were due, no doubt, to pressure.

Dr. Dudley Tait read a paper on "Renal Tuberculosis—Diganosis—Nephrectomy—Recovery" [to be published]. He said: Dr. Rosencrantz and myself prepared several microscopical specimens of the kidney and urine of this case. The first-class of cuts are stained with hematoxylin and eosin to demonstrate the histological lesions. The second, stained by Gram's method, shows pyogenic and tubercular germs well and their distribution, especially in the glomerular region. The third, stained by Weigert's double method, shows the same as the second. The fourth, by Erlich's method, for differentiating the tubercular bacilli from other bacteria.

Dr. D. D. Crowley: I believe that a kidney, the seat of tubercular deposits, should be removed. I have never removed a kidney from the living subject, but have tried it on the cadaver; it was quite a task, and to my mind to remove one from the living, and do it scientifically, requires considerable manual dexterity. Regarding catheterizing the ureter in the male, I have never performed that feat, and I believe that the majority of surgeons confess that they are unable to do so. I do not think, after inquiry, that there are any instruments to be had on this coast for the proper examination of the bladder. Dr. Tait ligated the vein and artery by one clamp and the ureter by another, in order to remove as much tissue as possible. In another case he simply ligated and removed the kidney. The wound was left open in this case and packed with iodoform gauze.

Dr. K. Pischl inquired how many cases are reported of tubercular kidney without other tubercular deposits in the body. Such cases of primary tuberculosis in organs to which bacilli have been carried through the circulation are very interesting. While the diagnosis of primary tuberculosis of the kidneys presents so much difficulty to the surgeon, it is a much easier task to detect the disease in the interior of the eye, the circulation of which is somewhat analogous to that of the kidney. The cases of primary tuberculosis of the uvea are very rare; in some of them general tuberculosis developed some time after the removal of the infected eye; in a few, no general infection took place.

Dr. S. Stillman: Regarding the treatment of the wound, I think that packing with gauze is the recognized proceeding, especially in tubercular kidney, where there is a possibility of involvement of the capsule. In one case seen lately, bacilli show in the pus. This case, a male, was operated on ten months ago in the east, and four months later in Denver. At both operations patient said the kidney was removed. Now, in this case, nephrectomy would not be in order. As for primary tuberculosis of the kidney, I cannot see why the tubercle bacilli could not find a nidus in the kidney, following an acute inflammatory condition. One author says tuberculosis may ascend from the bladder. This must be wrong or the general pathology of the disease must be erroneous

The President: About nine years ago, at St. Mary's Hospital, I operated in a case of tubercular kidney. The clinical history led to the belief that a stone would be found in the kidney; a nephrotomy was done, the condition of the kidney seen, and the organ removed. The man recovered but finally died of pulmonary consumption. I have had five or six cases of nephrotomy and nephrectomy by the lumbar method. In only one case was difficulty found in ligating, and in this case my assistant in raising up the last rib, broke it; after that there was no difficulty in applying the ligature. Everything healed nicely and recovery took place. I have seen the forceps left *in situ* for four or five days in fleshy people. I reported a case where Henry Morris did nephrotomy three times for stone; the symptoms continuing, he did nephrectomy and found a stone weighing 60 grains occupying one of the calices.

Dr. W. Watt Kerr: I would like to ask those gentlemen who remove kidneys, if they take any precautions to ascertain how many kidneys their patient had. In three or four instances in making *post-mortem* examinations I have found only one kidney, and have wondered if surgeons took this into consideration. It is not easy to palpate the kidneys unless the patient is emaciated, and at times it is almost if not quite impossible to percuss the outline of that organ. I think that if in doing nephrectomy the abdominal method were chosen, one could readily ascertain how many kidneys there were.

The President: I am of the opinion that if all the nephrectomies were done by abdominal section, the mortality would be far greater than could be caused by occasionally meeting a patient with only one kidney. In one case, I did Langenbeck's operation, opened the abdominal cavity and removed a cystic kidney which was full of pus. The woman passed 1½ ounces of urine in four days and then died. I found the other kidney all shrivelled up, but on palpation before the operation it had appeared as normal on account of the thickening of the tissues about the kidneys.

DR. G. C. MACDONALD: I remember a case of tubercular kidney operated upon by Dr. Von Hoffman, at St. Luke's Hospital, about a year ago. It was an old case, extensive adhesions had taken place and many sinuses extended into the kidney. On account of the extensive adhesions, some of which involved the colon, the kidney could not be removed. The patient rapidly sank and died.

DR. N. ROSENCRANTZ said: Regarding the catheterization of the ureters in females, Simon's method has been superseded by the modern cystoscope. As to primary tubercular lesions of the kidney, Israel, of Berlin, cites three cases where the *post-mortem* examination showed the lesion to have been primary. Reyer, in his classical work on the kidneys, also gives some excellent cases. Steinthal published several similar cases. As to palpating the kidneys, Israel says that he can palpate any kidney. The best way to demonstrate the existence of the two kidneys would be to catheterize both ureters; the cystoscope would then be of great assistance. As to the diagnosis of tubercular kidney, the finding of bacilli in the urine and the cystoscope would establish it; really, the latter is our most important means of diagnosis.

DR. TAIT, in replying, said: We have consulted recent publications on this particular question of primary tuberculosis of the kidney, without deposits elsewhere. Of course, the number of nephrectomies for tubercular trouble is rather large, but few of the reported cases are accompanied by a thorough statement of the patient's condition as to the other organs. A number of the *Boston Medical and Surgical Journal* for April, 1893, contained an important article by Richardson, who spoke of two cases of tubercular nephritis which were apparently of primary origin. Such cases are frequent of late, but most are viewed from an operative standpoint only, the accurate and complete diagnosis not being considered. In the lumbar method there is a chance to explore the affected kidney; if the lesions were far advanced, the anomaly referred to by Dr. Kerr would not be of very grave importance. I have had limited faith in exploration of the kidneys by the abdominal method. In a laparotomy, about five months ago at the French hospital, five surgeons had their hands in the abdominal cavity, and found nothing; fortunately there were no bad results, healing by first intention taking place. We generally have to depend on palpation under anesthesia to find the kidney and also on the use of the cystoscope. I do not agree with Dr. Crowley that nephrectomy is a difficult operation, though it be classed as capital. It is, on the contrary, quite an easy operation, but laborious on account of the small space one has to work in. The clamps were employed, as it was desired to extirpate as much tissue as possible. Gauze was used for packing and for drainage. Regarding the wounding of the peritoneum, if such happened, its edges could easily be puckered together and ligated. In some cases of nephrectomy one or two ribs are resected. In my second case, while operating, I cut the 11th and 12th ribs, and before I knew it had opened the pleural cavity. It was immediately sutured and no harm came from it. As far as I could ascertain, there have been about 13 cases of nephrectomy on this coast, most of them unreported in journals. The finding of bacilli in the urine is very important. We do not find bacilli in most mild cases of tubercular bladder, and no cases have been reported where bacilli have been found in the sperm, even in advanced cases of tuberculosis of the testes or epididymes. In mild cases of tuberculosis of the bladder, the foci are in the submucous tissues; from this, Bryson says that large amounts of tubercle bacilli in the urine are due to tubercular kidney. In reply to an enquiry, the speaker said methyl blue was administered by the mouth to determine the origin of the pus, but no results were obtained; the pus cells were not stained.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, August 7, 1893.

The President, WASHINGTON AYER, M.D., in the Chair.

Yellow Fever and Its Climatic Relations.—DR. A. W. PERRY read a paper on this subject. He said the mean temperature of a place, which is the average of morning, noon, and evening temperatures, is not a proper basis for conclusions as to the possibility of the occurrence there of yellow fever. Many localities, such as the valleys of California, have a mean temperature above 70° F., the generally accepted minimum which the cause of yellow fever can endure, because of a very high midday temperature. The minimum temperature in each 24 hours, which occurs between 2 and 4 o'clock in the morning, is of greater significance. Places having a summer average of these daily minima below 54° F., are seen to be free from yellow fever, notwithstanding the fact that the mean temperature is above 70° F.; and in localities where the disease has prevailed the mean of daily minima is above 70° F., *e. g.*, in New Orleans, in Memphis, in Havana, in Rio Janeiro. Hence it is fair to assume that the coast and valleys of California are not liable to epidemics of yellow fever; the only region in this State excepted being that about Fort Yuma, where for a month or so in summer the average of daily minima is in the neighborhood of 70°.

DR. F. A. A. BELINGE read a paper on "Freire's Researches on the Etiology and Prophylaxis of Yellow Fever [published at p. 550], in which the claims of Dr. Domingo Freire, of Rio Janeiro, were brought out with reference to the bacterial origin of the disease, and its prevention by vaccination.

DR. H. E. SANDERSON, in a paper with the title "The Etiology of Yellow Fever" [published at p. 547], reviewed the work done by bacteriologists in endeavoring to find the essential cause of the disease, noting the negative results of Dr. Sternberg's laborious search.

DR. L. C. LANE said he had observed twenty or more cases of yellow fever, all in advanced stages of the disease, in the hospital at quarantine, Staten Island,in 1855. Patients in the stage of "black vomit" presented a revolting picture. From the nose, ears, conjunctivæ and corners of the mouth exuded a red serum. A dark material was vomited with little effort and spit out like tobacco. One patient in this condition being questioned, replied that he felt no pain, but was very weak. He complained chiefly of excessive thirst, which was somewhat relieved by ice. His intellect was perfectly clear. The speaker said he had made several autopsies on yellow fever cases, some about 6 hours after death. All the serous cavities contained this reddish material. The microscope showed little in it but disintegrated blood cells. Nearly every person in contact with the disease caught it; the women who washed the bed clothes, the druggist of the hospital, even the old man who drove the dead cart contracted the disease and died. Some of the bedding thrown into the bay washed ashore at Coney Island. It was picked up by some Italians, who took the disease and died. Dr. Walser, one of the medical attendants, was taken down, but ultimately recovered. Medication seemed of little effect. With reference to the paper of the evening, he was pleased to note Dr. Perry's contribution to the thermometric relations of the disease.

DR. F. Z. BAZAN said that inhabitants of cold climates are exempt from yellow fever, but are more susceptible to it on going to a yellow fever country than the natives who have become inured to it. The people living at high elevations in yellow fever countries, *e. g.*, in Cuba, are very susceptible to the disease when they come down to the warm coast. Perhaps one day this disease may be prevented by inoculation, on the lines that Pasteur has devised for hydrophobia.

DR. BASIL NORRIS had never seen a case of yellow fever, but from his reading he would call attention to a few points with reference to quarantine. He referred to an article by Dr. Cochran, of Alabama, which advocated depopulation of small towns, and isolation of cases in large cities. During the war, by order of General Grant, federal troops were moved away from infected spots as soon as the disease was discovered. After the war this was neglected, till several regiments were decimated.

DR. J. O. HIRSCHFELDER said the negative results of Dr. Sternberg's search for the bacterial cause of yellow fever have received general acceptance. The cause of yellow fever has not been found. However, Dr. Sternberg believes he has found a cure. In his paper Dr. Perry referred to the large amount of hydrochloric acid in the stomach. Sternberg advised the administration of sodium bicarbonate 10 grains, and mercuric bichloride $\frac{1}{50}$ grain in two ounces of water every hour. Many cases were thus treated by Sternberg and others. In Hayti and Jacksonville, Fla., of 250 cases so treated, 6½ per cent. died, a signal improvement over the usual mortality of 25 to 30 per cent. in cases treated by other methods. Statistics will prove almost anything, if properly managed. The conclusions of Freire are thoroughly erroneous. He simply selected the right kind of cases. To reach results of real value, a very large number of unselected cases must be observed and treated by various methods for the purpose of comparison. "Until we find the germ we cannot attenuate it and inject it; and I am afraid we shall wait sometime before we succeed."

CORRESPONDENCE.

Dr. Hammond and the Medical Profession.

Sir: My respect for and my sympathy with the medical profession in America, and my knowledge of their sentiments, forbid me to regard Dr. William A. Hammond as their representative in the defense which he puts forward in the columns of the *New York Medical Journal,* September 16, of the practices of publicity hunting, by newspaper interviews, newspaper portraits, and of the use of and traffic in secret preparations, etc. I have, in the course of recent travel, received personally from many hundreds of prominent and representative physicians in Milwaukee, Washington, Boston, Philadelphia, Chicago, Cincinnati, Detroit, and from all parts of the United States, their cordial congratulations on the tone and substances of the addresses which I had the honor to deliver at Milwaukee and Washington. I have been assured on all hands of the entire sympathy of the great body of the profession in the views therein laid down and discussed. I should have been surprised, however, and perhaps disappointed, if they had not elicited some expression of pain and anger from certain quarters. "Let the galled jade wince, the withers" of the great American medical profession are, I am assured, "unwrung." Your correspondent, in an access of ethical agnosticism, assumes that the enumeration of ethical data as to medical conduct was, or could be, a reproval direct or implied to the medical profession of America. That is an unmerited insult which he addresses to his profession, and indicates a view which I apprehend to be special to himself. Let him enjoy the practices which he defends; I do not think he is likely to find much support or sympathy in them from medical men in good standing. His account of the position of the medical men in Great Britain is a parody undeserving of serious notice. So, as to myself, whom he favors with some personal abuse, I have been avowedly the scientific advisor to, but it is untrue that I have ever held any of the stock of, the Apollinaris Water Company. As to his other trivialities, I was the guest of the Pan-American Medical Congress, and on entering its headquarters I registered in ceremonious form. I have no desire to be honored amongst "the Pan-Anglicans," "the Loyal Legion," the "Fat Men of America," and the other objects of lay interest, with whom Dr. Hammond puts medical men on a par, and I do not agree with him that medical men should desire to share with them the honor of newspaper notoriety. I do not believe any details of my medical career have ever appeared in any lay paper. I suggest that it might be desirable for Dr. Hammond to rely less upon his imagination for his facts, and not to assume to speak for a profession from which he has no sort of mandate, and which would, I am well assured, repudiate, if consulted, both his advocacy and his methods of action and of expression. I am assured that he utterly misrepresents that profession both in his statement of principles which he ascribes to it, and in his abuse of myself.

I am, sir, yours faithfully, ERNEST HART.

REVIEWS AND NOTICES.

P. BLAKISTON, SON & CO., have in press for early publication a new illustrated dictionary of medicine, biology, and collateral sciences. Dr. George M. Gould, who is the author of the best small medical dictionary that we know of, will be responsible for the character of this more exhaustive work. It will be profusely illustrated, and will in every sense be a new work. The publishers state that, notwithstanding the great expense necessarily attending such a publication, the price will not exceed that of the usual medical text-book.

THE PHYSICIAN AS A BUSINESS MAN, OR HOW TO OBTAIN THE BEST FINANCIAL RESULTS IN THE PRACTICE OF MEDICINE, by J. J. Taylor, M.D. Philadelphia. The *Medical World*, pp. 144.

Its object is to show the medical man how he can put himself in a better financial condition simply by conducting his business on principles similar to those adopted by men in other walks of life. A great deal of instruction and good advice is given, but we doubt whether the book will do much to attain the desired end, as, in our experience, the physician is a poor business man, not because he is ignorant of what should be done, but because of his disinclination to attend to the necessary details.

THE MODERN ANTIPYRETICS; THEIR ACTION IN HEALTH AND DISEASE. By Isaac Ott, M.D. Former Lecturer on Experimental Physiology, University of Penna.; Ex-Fellow in Biology, Johns-Hopkins University, etc. Second edition revised and enlarged. Easton, Pa.; E. D. Vogel; pp. 124.

This is an enlarged and revised edition of the monograph upon this subject which Dr. Ott published a short time ago. His plan of the work is the same, consisting of a discussion of heat, heat-centres, measurement of heat, theory of fever, followed by a full discussion of the modern antipyretics, their pharmacology and therapeutics. The book consists of little more than 100 pages, but the amount of information relating to the nature of febrile processes is considerable, and will enable the reader to select his antipyretics with regard to their applicability to individual cases.

A PRACTICAL GUIDE FOR BEGINNERS TO THE DISSECTION OF THE HUMAN BODY. By Irving S. Haynes, Ph. B., M. D., Demonstrator of Anatomy in the Medical Department of the University of the City of New York. New York: E. B. Treat. pp. 250. $1.00.

This book will be of great value to beginners in dissection. It in no way takes the place of the standard works on anatomy, but is designed to supplement the practical instructions of demonstrators. It differs from the ordinary dissector's manual in being free from descriptive matter, the author deeming it best for students to rely on standard text-books for this portion of anatomy. Its scope is confined to giving explicit directions what to find, what to do, and how to do it. The student often wastes time in aimless wook, simply because he does not know when he has finished a given region. With such a guide at hand, he can not only determine just what structures are to be identified in a part, but also when he is ready to proceed. After having verified the descriptions of the text-book, the "Guide" stands ready to answer the question, "What shall I do next?" The work is designed to cover a course of nine weeks' dissection. Five days are allowed for each week, and each day's work is specifically marked out.

INTERNATIONAL CLINICS. Vol. I. Third series. Philadelphia: J. B. Lippincott Co. Price, $1.00.

In this volume the arrangement of subjects is better than in the former issue, although there is still room for improvement, as it would certainly be much more convenient for the reader if the lectures on empyema had followed one another consecutively, instead of being separated by articles on synovitis and disseminated sclerosis. Again, anyone interested in disseminated sclerosis would expect to find Prof Pepper's lecture on that subject in the section devoted to neurology, beside another article on multiple sclerosis by Dr. Dercum, but for some unknown reason it has been used to piece out a short account of a case of traumatic synovitis, which is contained in the section of general medicine. All the articles are good; several of them being upon topics which are particularly prominent before the profession of to-day. Among these may be mentioned a lecture on the thyroid and its diseases, by Dr. Thomas Oliver, in which goitre and exophthalmic goitre are fully discussed, both in relation to the physiology and pathology of the gland. Dr. W. Hale White has contributed a lecture upon rises of temperature due to diseases of the cerebrum, both organic and functional, in which much light is thrown upon the persistent temperatures, which are so often met in patients of a nervous diathesis. It is not possible to enumerate all the subjects discussed, but we can assure our readers that they will find this volume to be useful and interesting.

MODERN GYNECOLOGY; A TREATISE ON DISEASES OF WOMEN, COMPRISING THE RESULTS OF THE LATEST INVESTIGATIONS AND TREATMENT IN THIS BRANCH OF MEDICAL SCIENCE. By Charles H. Bushing, M.D., Assistant Gynecologist to the Demilt Dispensary, New York; formerly attending Physician to the Northern Dispensary. Illustrated. New York: E. B. Treat. pp. 380. Cloth, $2.75.

This book, of 380 pages, is intended as a treatise on modern minor gynecology for the uses of the general practitioner. Its purpose and its plan are purely practical. It is conservative and impartial, and, in most respects, a rational, but in others an incomplete and imperfect, guide. Electricity, the most distinctive feature of modern minor gynecology, is dismissed with a few words. The curette and curettage are inadequately described; severe chemical cauterization of the uterine mucosa is not sufficiently condemned; antiseptic precautions are altogether ignored, and, as too frequently happens in medical works, the rules of syntax are not always observed. Nothwithstanding these defects, however, which with others it is to be hoped may be remedied in future editions. "Modern Gynecology," by its brevity, by its avoidance of theoretical considerations of little practical import, will find not wholly unmerited favor with that large class of general practitioners who have little time, and not infrequently less inclination, for the study of those bulky treatises which the modern expansion of gynecology has made necessary to the specialist.

INTERNATIONAL CLINICS. Vol. IV. Second series. Philadelphia: J. B. Lippincott Co. Price, $1.00.

This volume, although it contains several very useful lectures, is not as interesting as its predecessors. There is too great a tendency to discuss several subjects, which are totally distinct from one another in the same lecture, and while such a practice is perfectly permissible during a visit to hospital wards, it is not so satisfactory in a publication, as it prevents a systematic arrangement of the articles, and diminishes the value of the volume for purposes of reference. The article upon "The Relation between Renal Disease and Disease of the Circulatory System," by Prof. Tyson, is very instructive. He expresses his belief that one of the most frequent causes of cardiac hypertrophy in patients suffering from Bright's disease, is an effort on the part of nature to compensate for the loss of kidney substance by raising the blood pressure and thereby producing a greater flow of urine. The theory cannot be said to be a new one, but it is rarely advanced, as most authors appear to give preference to the various mechanical theories, none of which have the physiological support that belongs to that quoted by Dr. Tyson. Dr. Thomas J. Mays has furnished an elaborate lecture on "Angina Pectoris," which probably is one of the most complete monographs upon the subject, and in which many remote causes of this affection, which are very frequently overlooked, are fully discussed, and their relation to the treatment of the disease indicated. As already stated, there are many other useful lectures upon every-day cases, all of which are worthy of careful reading.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held September 11, 1893, the following physicians, having complied with the law and the regulations of this Board, were unanimously granted certificates to practise medicine and surgery in this State:

Lewis J. Belknap, Hanford: Med. Dept. Univ. Michigan, June 28,'88.

Edith Ann Beauchamp, Orangevale; Cincinnati Coll. Med. and Surg., Ohio, Feb. 26,'84.
Frank L. Carpenter, Madison; Med. Dept. Univ. Buffalo, N. Y., Mar. 24,'91.
John Albert Cole, Alturas; Med. Coll. of the Pacific, Cal., Nov. 5,'78.
Herschel Eugene Currey, Los Angeles; Kentucky School of Medicine, June 30,'93.
Rebecca Lee Dorsey, Los Angeles; Woman's Med. Coll. N. Y. Infirmary, June 1,'93.
Geo. N. Drysdale. Brownsville; Dalhousie Univ.. Halifax, Nova Scotia, Apr. 26,'92.
Harold Gordon Gross, Eureka; Harvard Univ. Med. School, Mass., June 28,'93.
J. Lee Hagadorn, Los Angeles; Coll. Med. Univ. Southern California, June 8,'93.
Walter G. Hammell, Los Angeles; Medico-Chirurgical Coll. Pennsylvania, Apr. 2,'85.
Louise M. Harvey, Whittier; Woman's Med. Coll. Pennsylvania, May 5,'92.
John Henry Hundley, San Jose; Med. Coll. of Ohio, Cincinnati, Mar. 6,'90.
David Knapp, Pasadena; Detroit Med. Coll., Michigan, Mar. 19,'91.
George Edgar Luster, Los Angeles; Coll. Phys. and Surgs., Keokuk, Iowa, Feb. 17,'74; Jefferson Med. Coll., Pennsylvania, May 2,'93.
Guy Miller, Kelseyville; Med. Dept. Univ. Virginia, June 27,'88.
William Henry Perdomo, Anaheim; Med. Dept. Univ. City of New York, June 20,'82.
Elgar Reed, Los Angeles; Cincinnati Coll. Med. and Surg., Ohio, Apr. 4,'93.
M. A. Southworth, Oakland; Coll. Phys. and Surgs., New York, Mar. 12,'80.
Simeon Treible, San Rafael; Dartmouth Med. Coll., New Hampshire, Nov. 16,'80.
Gilbert Van Vranken, San Diego; Med. Dept. Univ. City of New York, Mar. 28,'92.
Peter Kemp Walters, San Francisco; Med. Dept. State Univ. Iowa, Mar. 5,'79.
Mary Berkes Wetmore, San Diego; Med. Dept. Univ. Buffalo, N. Y., Feb. 25,'80.
L. N. Wheeler, Tustin; Coll. Med. Univ. Southern California, June 8,'93.
Frank P. Wilson, San Francisco; Coll. Phys. and Surgs., New York, May 10,'88.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army, from August 20, 1893, to September 20, 1893.

Leave of absence for ten days, commencing this date, is granted Surgeon John D. Hall. Par. 2, S. O. 163, Dept. of the Columbia. Sept. 1, '93.

Leave of absence for one month, to take effect on or about October 1, 1893, is hereby granted Lieut. Col. J. V. D. Middleton, Dep. Surg. Gen'l. U. S. Army, with permission to apply for an extension of fifteen days. Par. 3, S. O. 84, Dept. of Cal., Sept. 4, '93.

Surg. John D. Hall, having relinquished the unexpired portion of the leave of absence granted him in No. 163, c. s., from these headquarters, is assigned to duty as acting medical director, relieving Lieut.-Col. Chas. C. Byrnes, Dep. Surg.-Gen'l. In addition to the duties herein assigned him, Major Hall will perform the duties of post surgeon at Vancouver Barracks, during the temporary absence in the field of Ass't. Surg. W. H. Arthur. Par. 3, S. O., 166, Dept. of the Columbia, Sept. 5, '93.

Leave of absence for one month, to take effect between the 25th inst. and the 5th proximo, is granted Major Chas. L. Heizmann, Surg., Fort Douglas, Utah. Par. 4, S. O. 29, Dept. of the Colorado. Sept. 6, 93.

Surgeon John D. Hall, is relieved from the duties assigned him in Par. 3, S. O., C. S., from these headquarters, and will return to his proper station, Fort Sherman, Idaho. Par. 2, S. O. 171, Dept. of the Columbia, Sept. 12, '93.

The journeys performed by Capt. R. R. Ball, Ass't. Surg., from Fort Townsend to Seattle, Wash., and return, on July 25th, Aug. 5th and 17th, and Sept. 8th, '93, on public business in connection with the examination of recruits in obedience to instructions from these headquarters dated April 5, '92, are confirmed. Par. 1, S. O., 174, Dept. of the Columbia, Sept. 15, '93.

Capt. Louis Brechmin, Ass't. Surg., is granted a twenty-three days leave, to take effect about Sept. 17, '93.

Leave of absence for one month, to take effect about Sept. 1, '93, is granted Capt. Paul Shillock, Ass't. Surg. (in the field,) with permission to apply for an extension of fifteen days.

The Commanding Officer U. S. Troops in the field near Fruitland, N. M., is authorized to employ a citizen physician in cases of necessity, during the absence of Capt. Paul Shillock, Ass't. Surg.

Leave of absence for one month, is granted Major David L. Huntington, Surg. U. S Army.

Lieut.-Col. Wm. Wolverton, Dept. Surg.-Gen'l., is relieved from duty at Watervliet Arsenal, N. Y., and assigned to duty as medical director, Dept. of the Columbia, to relieve Lieut.-Col. C. C. Byrne, Dep. Surg.-Gen'l U. S. Army.

Lieut.-Col. C. C. Byrne, Dep. Surg.-Gen'l., on being relieved from duty as medical director, Dept. of the Columbia, will report for duty as medical director, Dept. of Dakota, to relieve Col. Chas. H. Alden, Ass't. Surg.-Gen'l.

Official List of Changes in the Medical Corps U. S. Navy (Pacific Station) from August 20, 1893, to September 20, 1893.

Surgeon Geo. F. Winslow, detached from the U. S. S. "Monterey," and to proceed to Honolulu by the steamer of Sept. 12, and report for duty on board the U. S. F. S. "Philadelphia" as Fleet Surgeon of Pacific Squadron.

Surgeon Robt. Whiting, to the U. S. S. "Monterey."

Past Assistant Surgeon Geo. A. Lung, from the U. S. S. "Minnesota," and ordered to the U. S. S. "Thetis."

Past Assistant Surgeon Geo. Rothganger, granted one month's leave from the 22d of August, to visit the World's Fair.